Committee Minutes

ACADEMIC, RESEARCH, AND STUDENT AFFAIRS COMMITTEE
Inn at Virginia Tech, Latham Ballroom CDEF
3:00 p.m. – 5:30 p.m.
November 7, 2021

Committee Members Present: Melissa Nelson (chair), Anna James, Jeff Veatch

Committee Member Absent: Carrie Chenery

Board Members Present: Ed Baine, Shelley Butler Barlow, Greta Harris, C.T. Hill, Sharon Brickhouse Martin, Horacio Valeiras, Paolo Fermin (undergraduate student representative), Tish Long, Phil Miskovic (graduate and professional student representative), Robert Weiss (faculty representative), Preston White, Serena Young (staff representative).

Guests: Callan Bartel, Lynsay Belshe, Rosemary Blieszner, Charlene Casamento, Cyril Clarke, Al Cooper, David Crotts, Jessica Davis, Jon Deskins, Corey Earles, Jeff Earley, Kari Evans, Abbey Rowe Erwin, Laura Freeman, Ron Fricker, Mike Friedlander, Rachel Gabriele, Rebekah Gann, Cathay Grimes, Rebekah Gunn, Miles Guth, Lindsey Haugh, Kay Heidbreder, Rachel Holloway, Elizabeth Hooper, Byron Hughes, Chris Kiwus, Sharon Kurek, Lee Learman, Caroline Lohr, Nancy Meacham, Ken Miller, Laurel Miner, Justin Noble, Kelly Oaks, Kim O’Rourke, Mark Owczarski, Eric Paterson, Jeffrey Persons, Dwayne Pinkney, Charlie Phlegar, Ellen Plummer, Katie Polidoro, Menah Pratt-Clarke, Robin Queen, Chris Rahmes, Julie Ross, Tim Sands, Frank Shushok, Charlie Sloop, Aimee Daniel Sui, John Tartor, Don Taylor, Judy Taylor, Aimée Surprenant, Tracy Vosburgh, Nick Whitesell.

OPEN SESSION

1. Welcome. M. Nelson, chair of the committee welcomed board and committee members.

2. Review and Approve Open Session Agenda.

The committee voted unanimously to accept the agenda as presented including all items on the Consent Agenda.

3. Consent Agenda. Approval of August 31, 2021 Meeting Minutes; Report of Reappointments to Endowed Chairs, Professorships, and Fellowships; Resolution for Exclusion of Certain Officers/Directors, Resolution to Amend Policy 1026 and the Student Code of Conduct to align with new Title IX regulations Issued by the US Department of Education, approval of degree actions: resolution to Discontinue the Ph.D. in Educational
Research and Evaluation, a resolution establishing the School of Animal Sciences, and affirmation of a SCHEV-approved department name in the Virginia Tech Carilion School of Medicine.

4. **College of Science Update.** R. Fricker, interim dean provided the committee an overview of the College of Science. The college includes eight departments, the School of Neuroscience, and two academies and enrolls 4,827 undergraduate students and 612 graduate students. In addition to majors, students from across the university take courses offered by the college in physical and life sciences, math, and behavioral/social sciences. The college’s total research expenditures are above $36.1M and philanthropic participation and gifts are on the rise. Faculty members contribute significantly to the university’s prestigious research contributions and five faculty members have been awarded early career awards from the National Science Foundation, Department of Energy, and the National Institutes of Health. College priorities include the Academy of Data Science and the Women in Science Leadership program. Goals for the college include infrastructure and capital projects, and continued growth of graduate students and a diverse faculty.

5. **Council of College Deans Update.** L. Learman, dean of the Virginia Tech Carilion School of Medicine and representative to the committee from the Council of College Deans, offered remarks. Dean Learman noted that students, faculty and staff are spending time together again, observing appropriate precautions, and enjoying a vibrant, engaging and 3-dimensional college experience. Additionally, reports of sexual violence and misconduct raise concern about redoubling efforts to prevent these traumatic events. Deans applaud the establishment by President Sands of the Sexual Violence Culture and Climate Work Group to advance an inclusive, outcomes-driven and accountable approach for preventing sexual violence on campus. The Council of College Deans has been engaged in advancing the university’s faculty recruitment efforts including the Target of Talent and Future Faculty Diversity programs. As a follow-up to the committee’s discussion in August about the future of work, Dean Learman shared college-specific efforts designed to optimize work life particularly among administrative support areas such as advising.

6. **Provost’s Update.** C. Clarke, executive vice president and provost, updated the committee on several academic initiatives. First, Provost Clarke reviewed the manner in which the university reviews academic programs. Courses are reviewed annually by students who complete a Student Perceptions of Teaching (SPOT) survey that is both a quantitative and qualitative assessment. In addition, courses are peer reviewed when instructors go up for tenure and/or promotion. Degrees and certificates are subject to oversight and review by college and university faculty and administrators and by the State Council for Higher Education of Virginia (SCHEV). Reviews include the termination of degrees and will include a teach-out plan. Since 2014, 13 degree programs have been
discontinued or consolidated with others. Periodically, instructional methodologies and locations are also reviewed. For example, the Math Emporium is a large teaching space in Blacksburg that accommodates computer-based, self-paced, instruction for introductory mathematics courses. The emporium was established approximately 20 years ago using Pew funds to explore innovative ways to teach mathematics. Currently, students indicate that while they achieved a deeper understanding of the subject matter, there is a level of dissatisfaction that merits a comprehensive review. The Department of Mathematics is conducting a review that includes student experiences and other analyses. The review will help make a decision about whether the Math Emporium should be continued and, if so, at what scale.

Provost Clarke reported on new leadership and upcoming leadership changes. New to the university is Aimée Surprenant, dean of the Graduate School. She comes to Virginia Tech from Memorial University in Canada. Searches for college deans are underway or nearing completion these include College of Science, Pamplin College of Business, and a 2022 search is anticipated for a dean for the College of Architecture and Urban Studies. The search for a vice provost for faculty affairs is nearing completion.

Active projects and initiatives include enrollment growth planning that includes internal and external capacities and consultation with the town of Blacksburg and other surrounding, supportive communities. The university’s experiential learning efforts are being shaped by a steering committee and will be taken up as a University Mission Initiative in accordance with shared governance system. Distance and online learning is being reviewed by a work group that will formulate an initial plan. The academic initiatives that comprise the university’s Destination Areas have reached a new phase and will employ a project-based approach to solve substantive problems. Graduate education will benefit from continued review and leadership from Dean Surprenant. The provost and colleges continue to refine the academic budgeting model.

7. Discussion: National Security Institute. Daniel Sui, vice president for research and innovation, Eric Paterson, executive director of the National Security Institute, Laura Freeman, director of the Hume Center, and JB Persons, Ph.D. student in electrical and computer engineering offered an overview and answered questions regarding the newly established National Security Institute. The institute aims to further advance the success of the Hume Center in advancing scholarship and engaging undergraduate and graduate students in research initiatives that result in innovative, experiential education experiences. Industry and government partners are engaged with the institute and center in providing funding to grow experienced researchers who understand the interdisciplinary application, ethical, and policy dimensions of natural security. The institute has partnerships with research institutions within and external to the Commonwealth and has graduate students conducting research in multiple military and
civillian locations. The National Security Institute will strategically develop in a phased manner over the course of several years.

8. Agenda Items for March ARSA committee meeting. Committee members will submit agenda topics for consideration at future meetings.

Welcome

ACADEMIC, RESEARCH, AND STUDENT AFFAIRS COMMITTEE

The chair of the committee will welcome committee members and others to the committee open session.
Acceptance of Agenda

ACADEMIC, RESEARCH, AND STUDENT AFFAIRS COMMITTEE

The chair of the committee will review and ask for acceptance of the Open Session Agenda and items as listed on the Open Session Consent Agenda.
Open Session Consent Agenda

ACADEMIC, RESEARCH, AND STUDENT AFFAIRS COMMITTEE

November 7, 2021

A. Approval of August 31, 2021 Meeting Minutes
B. Report of Reappointments to Endowed Chairs, Professorships, and Fellowships
*C. Approval of Pratt Fund Program and Expenditures Report
(Shared with Finance and Resource Management)
*D. Resolution for Exclusion of Certain Officers/Directors
*E. Resolution to Amend Policy 1026 and Student Code of Conduct
to Align with New Title IX Regulations Issued by the U.S. Department of Education
*F. Approve Degree and Academic Program Actions
  • Resolution to Discontinue the Doctor of Philosophy in Educational Research
    and Evaluation (EDRE)
  • Resolution for the Establishment of a School of Animal Sciences
  • Affirmation of SCHEV-Approved Department Name in VTCSOM

* Requires Full Board Approval
REPORT

Reappointments to Endowed Chairs, Professorships, or Fellowships (4)

November 7, 2021

The president and executive vice president and provost have confirmed the reappointment of the following faculty to an endowed chair, professorship, or fellowship with a salary and/or operating supplement provided by the endowment and, if available, with funds from the eminent scholars match program.

College of Engineering (4)

Rakesh Kapania Norris and Laura Mitchell Professorship of Aerospace Engineering

Brian Kleiner Ralph H. Bogle, Jr. Professorship

Mark Psiaki Kevin Crofton Faculty Chair in Aerospace and Ocean Engineering

Konstantinos Triantis John L. Lawrence Professorship
The College of Science’s “deep commitment to world class scholarship, fundamental research, pedagogical excellence, innovation, and outreach positions us as the college with the ability to significantly ‘move the needle’ on Virginia Tech’s rankings” as a global land-grant university.

— COS 2020 Annual Report
ACCELERATING SCIENCE
Who We Are and How We’re Organized

- 8 Departments
  - 4 Physical & Life Sciences
  - 2 Mathematical Sciences
  - 2 Behavioral/Social Sciences

- 1 School of Neuroscience
- 2 Academies:
  - Integrated Science
  - Data Science

- 4,827 Undergraduate Students
- 612 Graduate Students
- 423 Total Faculty
- 248 Tenure-track Faculty

– change since academic year 2017
98.4%
Percentage of VT undergrads who take at least one COS course.

1 in 4
The ratio of undergrad student credit hours taught in COS to the entire university.

260,894
Number of undergrad student credit hours COS taught in AY21.

94%
Percentage of COS undergrad courses taught in-person this semester.
ACCELERATING SCIENCE
We Are “Moving the Needle” on Research and Philanthropy

RESEARCH

$47.5M
Total Research Awards

286
Number of Research Awards

$36.1M
Total Research Expenditures

$32.6M
Federal Research Expenditures

ADVANCEMENT

$9.4M
Total Commitments

18.4%
Alumni Participation

$948K
Annual Funds

4,851
Donor Count

We Are “Moving the Needle” on Research and Philanthropy

– change since academic year 2017

* – change compared to average total commitments from 2017 to 2020

Attachment B
103,967
Number of Google Scholar citations by COS faculty in 2020.

11.5
Average number of papers per tenure track faculty member per year from 2015-18.

5
Early career faculty awards in 2020 (3 NSF CAREER, 1 DOE, 1 NIH).

10X
ROI of Dean’s Discovery Funds invested in College of Science faculty.
SELECT STRATEGIC PRIORITIES

> Academy of Data Science

BE A DESTINATION FOR TALENT
College of Science: Continue to build a robust, diverse, inclusive, scientific community.

ADVANCE REGIONAL, NATIONAL, AND GLOBAL IMPACT
College of Science: Be a global leader in scientific research, discovery, scholarship, and education.

ELEVATE THE UT PROSIM (THAT I MAY SERVE) DIFFERENCE
College of Science: Excel in outreach, engagement, and economic development.

INSURE INSTITUTIONAL EXCELLENCE
College of Science: Invest in people & infrastructure to support teaching, research, and service.

> Women in Science Leadership program
Building for the Future
We Are Focused on Advancing Science in Support of Virginia Tech

Infrastructure Projects
- Data and Decisions Bldg
- Undergraduate Science Lab Building

Capital Projects
- Hahn
- Robeson
- Derring

Opportunities & Challenges
- Further diversifying faculty & grad student populations
- Increasing our graduate student population
- Space for future growth
Council of College Deans Update

ACADEMIC, RESEARCH, AND STUDENT AFFAIRS COMMITTEE

November 7, 2021

Lee Learman, dean of the Virginia Tech Carilion School of Medicine, serving as a liaison with the council of college deans will update the committee on behalf of the council.
Provost’s Update

ACADEMIC, RESEARCH, AND STUDENT AFFAIRS COMMITTEE

November 7, 2021

Cyril Clarke, executive vice president and provost, will provide an update.
VIRGINIA TECH
NATIONAL SECURITY INSTITUTE

ACADEMIC, RESEARCH, AND
STUDENT AFFAIRS COMMITTEE

Eric Paterson | Executive Director

November 07, 2021
The National Security Institute will perform interdisciplinary research and development, provide experiential learning and education, solve challenges in national security by strengthening technology, standards, public policy, and the national security workforce.

The National Security Institute aspires to become the nation’s preeminent academic organization for integrated research and development, and experiential learning to advance national security.
### TECHNICAL DIVISIONS

- Spectrum Dominance
- Aerospace and Ocean Systems
- Intelligent Systems

### MAJOR PROGRAMS

- Ted and Karyn Hume Center for National Security and Technology
- Secure Futures Lab
- Beyond Technology

### FACILITIES
EXPAND TENURE-TRACK FACULTY ACROSS COLLEGES

- College of Agriculture and Life Sciences
- College of Architecture and Urban Studies
- Pamplin College of Business
- College of Engineering
- College of Liberal Arts and Human Sciences
- College of Natural Resources and Environment
- College of Science
- Virginia-Maryland College of Veterinary Medicine
49 EXPERIENTIAL LEARNING PROJECTS

- Materials & Advanced Manufacturing in Applied Electromagnetics
- Quantum Cryptography Algorithm Development
- Hypersonic Simulation
- Augmented Reality-Enhanced Situational Awareness
- Space Domain Awareness Telescope
- Autonomous Drone Racing
- Russian Disinformation
- Diplomacy Lab
- Natural Language Processing Research
- Development of a space camera for UV spectroscopy
- Security in Coastal Zones
STUDENT ENGAGEMENT

Academic Year

Total Unique Students

Graduate Research Assistants
Experiential Learning
Workforce Development
Scholarship
Intelligence Community Center for Academic Excellence

ERIC PATERSON
- Executive Director, National Security Institute
- Rolls-Royce Commonwealth Professor of Marine Propulsion

LAURA FREEMAN
- Director, Intelligent Systems Lab, National Security Institute
- Director, Information Science and Analytics, VT-ARC
- Assistant Dean for Research, College of Science

JEFFREY ‘JB’ PERSONS
- Ph.D. candidate, Computer Engineering
The Chair of the Academic, Research, and Student Affairs Committee will discuss possible agenda items for future meetings.
The Chair of the Academic, Research, and Student Affairs Committee will adjourn the committee meeting.