University Council Minutes  
October 19, 2015  
3:00 PM  
1045 Pamplin Hall


Absent: Tim Sands (with notice), Cyril Clarke (with notice), Jack Davis, Charles Phlegar, Jacquelyn Fisher, Jennifer Nardine, Joe Merola (with notice), Anita Puckett, Susanna Rinehart, Christopher Beattie, Kathrine Carter (with notice), David Dillard (with notice), Nathan King, Stacey Poertner (with notice), Tom Tucker (with notice), Marwa Abdel Latif, Alphonso Garrett, Michael Martin (with notice), Homero Murzi (with notice), Tara Reel, Dan Cook (with notice), Morgan Sykes

Guests: Rachel Gabriele, Gary Long, April Myers, Ellen Plummer, Rick Sparks, David Travis

Dr. Finney called the meeting to order at 3:00 p.m. A quorum was present.

1. **Adoption of Agenda**

A motion was made and seconded to adopt the agenda. The motion carried.

2. **Announcement of approval and posting of minutes of October 5, 2015**

Dr. Finney noted that these minutes have been voted on electronically and can be publicly accessed on the Governance Information System on the Web (http://www.governance.vt.edu).

3. **Announcement of Approval and Posting of Commission Minutes**

These minutes have been voted on electronically and will be posted on the University web (http://www.governance.vt.edu). Note that the purpose of voting on Commission minutes is to accept them for filing. University Council By-laws require that policy items be brought forward in resolution form for University Council action.

- Commission on Graduate Studies and Policies  
  September 16, 2015
4. **New Business**

**Commission on Graduate Studies and Policies**
Resolution CGSP 2015-16A

**& Commission on Undergraduate Studies and Policies**
Resolution CUSP 2015-16D

Resolution to for the Establishment of a School of Neuroscience at Virginia Tech

Dr. Gena Chandler-Smith presented the resolution for first reading and then called on Dr. Lay Nam Chang to give a presentation (attached) on the School of Neuroscience.

**Commission on Faculty Affairs**
Resolution CFA 2015-16A

Resolution for Tenure Appointments in the College of Science for Faculty in the School of Neuroscience.

On behalf of Dr. Abbas, Dr. Jack Finney presented the resolution for first reading. New faculty are currently being recruited for the proposed School of Neuroscience. These faculty members are individuals who would typically be recruited by either a school of medicine or an existing school of neuroscience and view themselves as interdisciplinary investigators or researchers who do not identify in a traditional sense to departments of biology, psychology, economics, etc. A request was made by Dr. Harald Sontheimer to begin recruiting tenured and tenure-track faculty for the School of Neuroscience in the current year before the school is officially in existence. These positions will be held temporarily in the College of Science until such time that the School of Neuroscience is formally recognized. There will be one committee formed that will approve faculty appointments. Dr. Finney indicated that these faculty members will report to Dr. Harald Sontheimer as the proposed school director, who in turn will report to the Dean of the College of Science. The committee will mostly review annual evaluations because promotion and tenure is not typically done within the first two years of anyone’s appointment. The expectation is for faculty who come in on the tenure track to establish excellence here at Virginia Tech. If a faculty member is to be hired with tenure, then the committee will handle the evaluation and recommendation for tenure, Dr. Harald Sontheimer and Dean Chang will write letters of support. The recommendation and letters will be forwarded to the Executive Vice President and Provost and the President for approval. A question was raised as to the number of committee members. The resolution indicates five but there will be an additional tenured Neuroscience committee member in the second year. A suggestion was made to amend the sixth whereas clause to state “…five or six individuals drawn from cognizant programs with the college…” The resolution will be edited for the second reading.

5. **Adjournment**

There being no further business, a motion was made to adjourn the meeting at 3:40 p.m.
The Proposed School of Neuroscience

What is Neuroscience?

The scientific study of Brain-Mind & Behavior

- Broad, interdisciplinary
- Attempts to explain complex behavior at a genetic, molecular, cellular and systems level
- Evolved from neurology and biology as independent discipline
- One of the “hot” emerging majors with tremendous student interest
What draws students to Neuroscience?

Neuroscience Subdisciplines

- Genetic Neuroscience
- Molecular Neuroscience
- Cellular Neuroscience
- Neurophysiology
- Systems Neuroscience
- Developmental Neuroscience
- Cognitive Neuroscience
- Clinical Neuroscience
- Behavioral Neuroscience
- Social Neuroscience
- Neuroeconomics
- Neuroethology
- Neuro-Law
- The Artistic Brain
- Computational Neuroscience
- Neuro-Robotics
Careers Paths of Neuroscience Students

Pre-Health Major (Med/Dentistry/Vet/PA/Optometry)
- Physician, Dentist, Veterinarian, Physicians Assistant

Pre-Lifesiences Major (Graduate studies)
- Graduate Faculty, Federal Research National Institutes of Health (NIH)/Centers for Disease Control and Prevention (CDC), Biotech, Big Pharma, Sales & Product Support

Pre-Professional Major (A broad range of professions)
- Law, Business, Finance, Architecture, Marketing, Art, Science Policy, Educational Leadership

Why a “School of Neuroscience”?

- Captures the interdisciplinary nature of Neuroscience and prevents “siloing”
- Communicates to students and faculty that Virginia Tech is making this a major emphasis area
- Positions VT-Neuroscience to be a Destination Program
- Support the “One Health Mission” of Virginia Tech, Virginia Tech Carilion Research Institute (VTCRI), Veterinary Medicine and Carilion Clinic
- Tremendous potential economic impact for Virginia Tech and the Commonwealth
Direct Economic Impact

- Additional 800-1000 students
  => $4M/year additional tuition revenue
- 30 additional faculty at Virginia Tech & VTCRI
  => $20 M/year grant expenditures
- Institutional & individual training grants
- Joint large grant initiatives with engineering, computer science, Veterinary Medicine, Carilion Clinic
- Access to federal funding streams where Virginia Tech is not currently receiving its market share (NINDS, NIMH, NIDA, NSF, DOD)

Federal Funding:
National Institutes of Health (NIH)

Source: AAAS Report: Research and Development series and agency budget documents. FY 2012 and FY 2013 figures are latest estimates. © 2012 AAAS
We don’t realize our fair market share and have plenty of room to grow!
NSF - 2016 Appropriations Bill

- $146.9M in total funding for neuroscience, an increase of $40.5M above the FY15 level
- Virginia Tech is uniquely positioned to take advantage of funding requests for neuro-engineering projects such as brain machine interfaces, neuro-robotics and smart prostheses

Ensures that we compete for marquee programs
Return on investment (annual)

1. Tuition: $4-6M
2. Grants: $20M
3. Contracts: $10M
4. Licensures
5. Startup Companies

Indirect impact

• Supports the growth of Virginia Tech Carilion Research Institute and Carilion Clinic
• Move towards one campus
• Expanding entrepreneurship opportunities
• Strengthens Virginia Tech’s role in Virginia’s Brain State Initiative
• Growth of additional graduate programs in NS related fields, neuro-robotics, neuroeconomics, neuro-medicine
• Increase research impact/publications and thereby school ranking
• Community outreach/raising awareness
Current status of Neuroscience

- Degree approved for fall 2015
- Already 178 students enrolled
- Core curriculum in place
- A growing list of electives in place
- New electives rolling out in 2016
- 61 faculty members affiliated
- 15 additional faculty members to be hired over the next 3 years, with 5 new hires in 2015/2016

NEW Neuroscience courses in 2016

*Some will be offered as “Special Study” in the coming semesters*

- NEUR 4034 Diseases of the nervous system
- NEUR 3144 Mechanisms of learning and memory
- NEUR 4984 Neuroeconomics
- NEUR 3464 Neuroscience and society
- NEUR 3XXX Molecular basis for addiction
- NEUR 3XXX Neuroimmunology
- NEUR 3XXX Neurogenetics
- NEUR 4544 Synaptic structure and function
- NEUR 4964 Neuroscience capstone experience
Future of Neuroscience at Virginia Tech

- School of Neuroscience => 2016
- Additional majors including a B.A.
- A minor will be added (2017)
- Master’s/Ph.D. pathways planned (2017/18)
- New location: Sandy Hall (2017)

Sandy Hall, School of Neuroscience

- Neuroscience Club
- Computer Lab
- Neuro-Commons TED talks
Neuroscience Q & A