Virginia Tech Board of Visitors Meeting

Information Session

Sunday, November 17, 2019
1:30 – 3:35 p.m.

The Inn - Solitude Room
Virginia Tech Campus

Link | License | Launch/Apex Center for Entrepreneurs
• Dr. Brandy Salmon, Associate Vice President for Innovation and Partnerships
• Dr. Sean Collins, Director, Apex Center for Entrepreneurs

Innovation Campus Update
• Dr. Brandy Salmon, Associate Vice President for Innovation and Partnerships

Strategic Plan Dashboard
• Dr. Menah Pratt-Clarke, Vice President for Strategic Affairs and Diversity

Enrollment Management
• Dr. Luisa Havens-Gerardo, Vice Provost for Enrollment Management
• Dr. Frank Shushok, Interim Vice President of Student Affairs

Constituent Reports
• Ms. Madelynn Todd, Undergraduate Student Representative to the Board
• Mr. Ryan King, Graduate Student Representative to the Board
• Dr. John Ferris, Faculty Representative to the Board
• Ms. Tamarah Smith, Staff Representative to the Board

Principles of Community
• Mr. Horacio Valeiras, Rector of the Board of Visitors
The Innovation Ecosystem

1. University Research
2. Corporation
3. Entrepreneur

Technology Creation
Commercialization

Innovation Sources
1. Universities
2. Corporations
3. Entrepreneurs

Innovation Development
A. Basic Research → Translational Research
B. Corporate Development
C. Accelerator/Incubator/Economic Development

Product

Investment Phase
- Seed
- Early Stage
- Growth Stage
- Later Stage
- Exit

Self-Sustaining Company

Grants
Friends & Family
Angels
VC & CVC

M&A

Government
Foundation
Philanthropy
Corporation

The Innovation Ecosystem
LINK + LICENSE + LAUNCH

Supporting Virginia Tech from discovery to market
LINK + LICENSE + LAUNCH

Advancing Industry Partnerships

Driving Technology Commercialization
with VTIP

Propelling new ventures
Advancing Industry Partnerships

Driving Technology Commercialization with VTIP

Propelling new ventures
Through a $1.25M gift, Caterpillar has become a second founding partner with the Calhoun Discovery Program in the Honors College, supporting scholarships and experiential learning.
Strategic activities like the Blocksburg Summit, 2019 to build big and long-lasting partnerships with industry around emerging technology trends, talent, and innovation.
AND THEN, HAPPENED: HQ2
INNOVATION CAMPUS
A GAME CHANGER FOR VIRGINIA TECH, HIGHER EDUCATION AND THE NATION
Why discovery to market matters to Virginia Tech (and other leading universities).

01 Faculty and student recruitment and retention
02 Value creation and knowledge dissemination
03 Entrepreneurial initiatives and culture
04 Bayh-Dole Act to protect and promote IP from federal funding
05 Economic development and public good
06 Commitments to the community and the Commonwealth
We support transition of inventions and assets from a wide range of sponsors.
LICENSED

New IP License to GreenShift Corp. to take the fog harp passive water harvesting system to market to support availability of water globally.
Strengthened relationship with AngioDynamics with a new license fee and doubled royalty rate to recognize the value of key Virginia Tech IP.
Enabled BEAM Diagnostics to spin out so it can improve the lives of individuals suffering from alcohol and other substance use problems.
LINK LICENSE LAUNCH
Supporting Virginia Tech from discovery to market

Technology development
(LINK supports front-end, faculty-led programs)
- Identify partners
- Pursue grants and contracts
- Clarify technical aims
- Facilitate market-relevant research directions
- Launch program
- Conduct R&D
- Establish customer feedback loops
- Test and compare
- Disclose inventions
- Capture and protect strategies for IP
- Refine design
- Enhance performance
- Lower cost of components
- Proof of concept (risk reduction)
- Incorporate into products
- Prototype for manufacturing
- Test and refine

Commercialization and impact
(LICENSE & LAUNCH)
- Assess opportunities
- Landscape through Inspire
- In-reach to faculty
- Match-make to build portfolios
- Discover customers
- Map stakeholders
- Understand users
- Clarify technology requirements
- Conduct IP analysis
- Map partners
- Establish mentor networks
- Test with users
- Compare against competitors and partners
- Undertake market analysis
- Host pitch events
- Host roundtables and showcases
- Fund POC grants
- Engage the community
- Develop business plan
- Support start-up, grants and applications
- License or option

APPLIED
VRIF Round 3, Research Commercialization Advancement Plans to support fill the pipeline, enhance engine, build a resource portal.
2019 highlights: LICENSE & LAUNCH

- 19 New IP licenses
- 6 tech startups
- $1.5M+ VTIP license revenue
- 148 New Invention Disclosures received and processed
- 73 patent applications filed + 3 plant variety patents filed
- 51 new patents awarded
- 3 new hires (4 team members now onboard)
To check out: our new website!

https://vt.edu/link/index.html
MEET OUR STUDENTS

MARIA JERNIGAN
Philosophy, Theatre, & Spanish B.A.
2018 VT Undergraduate Student of the Year
Hometown: Virginia Beach, VA

Company: Redshift Education
Title: Founder & CEO
redshift-education.com
MEET OUR STUDENTS

ALI ROGHANI
PhD student, Mechanical Engineering
Mechanical Engineering, B.S. & M.S.
Business Administration, M.S.
Hometown: Blacksburg, VA

Company: ThermaSENSE Corp.
Title: Founder & President
thermasensecorp.com
MEET OUR STUDENTS

JULIA WEBER
Industrial & Systems Engineering, B.S.
Entrepreneurship minor
Hometown: Oaktown, VA
Innovate Living-Learning Community
Title: President
@InnovateVT
WHAT WE DO

We inspire and empower our students, faculty, and alumni to turn their passion, purpose, and ideas into action.

Act-Measure-Learn-Repeat
WHY WE DO IT

We believe innovation and entrepreneurship can be a powerful force within organizations of all types and sizes, in established businesses as well as new ventures.
APEX CENTER NAMED

APEX CLOSES NYSE

NAMED ONE OF THE BEST EMERGING CENTERS WORLD-WIDE

APEX PROGRAM PORTFOLIO BUILD OUT

INNOVATE LLC - ALL 7 COLLEGES INVOLVED
(35 students engaged)

(>2800 students engaged)
LEARN

KICKOFF
- INNOVATE LLC
- HOKIE MAKERS TREKS
- LECTURE SERIES
- FIRESIDE CHATS
- ACADEMIC COURSES
- ENTREPRENEUR CLUB

BUILD

CAPSTONE COURSES
- GLOBAL CHALLENGE

LAUNCH

ENTREPRENEUR-IN-RESIDENCE
- ENTREPRENEUR FORUMS MENTORSHIP

2500 STUDENTS
250 STUDENTS
100 TEAMS
25 STUDENTS
12 INCORPORATED COMPANIES

ENTREPRENEURSHIP EDUCATION
NEW VENTURES
Areas of University-Apex alignment

NEW EDUCATIONAL PARADIGM

INCLUSION & DIVERSITY

VTC HEALTH SCIENCES & TECHNOLOGY CAMPUS

WASHINGTON METRO AREA
Proposed University-wide e’ship platform

Pamplin College of Business

College of Engineering

College of Natural Resources & Environment

College of Agriculture

VT Carilion School of Medicine

College of Architecture & Urban Studies

College of Science

College of Liberal Arts & Human Sciences

Honors College - Calhoun Discovery
Proposed College-level “spoke”

- Program faculty
- Collegiate faculty
- Research faculty
LEGACY OF VIRGINIA TECH ENTREPRENEURSHIP

1,815+  # of alumni associated with private market transactions

366+   # of Virginia Tech affiliated founders

$44.6B Transaction activity of VT founders since 2008

$4.2B Capital investment activity since 2008

Source: PitchBook July 2018
Thank you for your ongoing support of entrepreneurship at Virginia Tech!
QUESTIONS
Resource slides
New Venture Development
Update: Virginia Tech Innovation Campus

Board of Visitors | November 2019

Delivery Team
Delivery Team integrates comprehensive set of work-streams

- Programs
- Master Planning & Real Estate
- Leadership
- Communications & Marketing
- Partnerships & Fundraising
- Student Services & Operations
- Faculty Hiring
- Community Relations
- Government Relations
MOU between Commonwealth and Virginia Tech executed

Governor Northam Announces Plans to Graduate 31,000 in Computer Science, Boosting Tech Talent Pipeline

Agreements with 11 Virginia universities resulted from HQ2 bid

PETERSBURG—Governor Ralph Northam today announced that Virginia will invest in the Commonwealth’s tech talent pipeline to create 31,000 new computer science graduates over 20 years, under agreements be signed with 11 universities.

The Tech Talent Investment Program will benefit students and tech employers in every corner of the Commonwealth. It grew out of Virginia’s proposal to Amazon, which will locate its second headquarters in Northern Virginia.

The program is a performance-based initiative designed to create at least 25,000 new bachelor’s and master’s degrees in computer science and related fields over the next 20 years. The agreements with the 11 universities will create 31,000 new degrees in these fields, exceeding the legislative goal. Funding for the Tech Talent Investment Program was provided in the Virginia budget approved earlier this year.

“This initiative is an investment in Virginians,” said Governor Northam. “Virginia’s tech sector will continue booming only if we can train the workforce those jobs require. With today’s announcement, we are educating a workforce that will fill jobs at hundreds of tech companies around the Commonwealth, including at Amazon, helping boost our economy and quality of life in every corner of Virginia.”

“The Tech Talent program creates clear pathways for Virginia students to obtain high-skill jobs by equipping them with the necessary skills to succeed in high-demand fields,” said Secretary of Education Atif Qarni. “This agreement with many of our public higher education institutions will support business and industry in Virginia, while preparing our students to enter the 21st century workforce.”

The boom in tech industries in recent years has increased demand for workers, and the Tech Talent program will help Virginia keep pace. Colleges and universities applied to the state for funding to expand their existing computer science degree programs. Subsequent agreements will be established with other institutions, including the community colleges.

“These 11 institutions, and others that will follow, demonstrate the qualities that make Virginia’s higher education system among the best in the nation: innovation, responsiveness, alignment with state needs and performance,” said Peter Blake, Director of the State Council of Higher Education for Virginia.

Commitments to increase MS and M.Eng degrees in computer science & computer engineering by Virginia Tech

<table>
<thead>
<tr>
<th>Virginia Tech commitment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Baseline:</td>
<td>97</td>
</tr>
<tr>
<td>Degree Goal by 2026-27</td>
<td>739</td>
</tr>
<tr>
<td>% Growth In-State</td>
<td>50%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Commonwealth commitment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital for Innovation Campus: $167.7M</td>
<td>$167.7M</td>
</tr>
<tr>
<td>One-Time Start-Up:</td>
<td>$18.5M</td>
</tr>
<tr>
<td>Recurring annual budget:</td>
<td>$3.3M</td>
</tr>
<tr>
<td>Total through 2038-39:</td>
<td>$250M</td>
</tr>
</tbody>
</table>
We are excited to launch the new computer science graduate program ... This advanced curriculum is designed to meet the needs of business and industry and will fulfill a critical need in Virginia and across the nation as we seek to fuel the tech-talent pipeline.”

- Julie Ross, Dean of College of Engineering

- The State Council of Higher Education for Virginia approved a new master of engineering degree in computer science, the first newly created program for Virginia Tech’s Innovation Campus in Alexandria, Virginia.
- The application deadlines will enable Spring and Fall 2020 enrollment.
- Students will be able to choose part-time, full-time, or full-time accelerated programs.
- Degrees will require 30 hours credit hours of graded coursework with topics that include software design and development process, collaborative work skills, and ethical issues related to computing.
- Initial concentrations include courses in AI, computer security, data analytics and machine learning.
The Innovation Campus is serving as a magnet for talent

Virginia Tech welcomes

Dr. Sara Hooshangi

Ph.D., Electrical engineering, Princeton
B.Eng., Electrical & computer engineering, McGill University

Recruited from George Washington where she served a Program Director; PI on NSF program dedicated to adult leaner pathway programs.
Meet the experts: Innovation Campus Fellows 2019
SITE OVERVIEW

- Situated on 15 acres in Alexandria just south of the Four Mile Run stream
- Anchoring a 65-acre mixed-use district planned in North Potomac Yard
- Will feature classrooms, incubator area for startups, offices for industry collaboration, and space for alumni/ community events
- Located near the new Potomac Yard Metro station planned at the south end of the property
Innovation Campus master planning is underway. Here, Virginia Tech architect, Liza Morris leads a series of charrettes with the campus community.
Existing conditions of North Potomac Yard
Alexandria, Virginia
Proposed DUSP Concept I Plan to the City of Alexandria, November 1, 2019
WE’RE HIRING
Vice President & Executive Director
Innovation Campus
Expected completion: Jan 2020
Virginia Tech continues to be on the national stage. Here, President Sands is helping launch an AWS Cloud program with other state universities.
Drivers of Development in the D.C. Region: Amazon and Virginia Tech

Here, President Sands on panel with JBG Smith and Amazon at the Urban Land Institute Conference.
Other universities are recognizing the opportunity and expanding operations and/or moving in. University of Maryland has committed to 8000 square feet in Arlington in a “Discovery Center” proximal to JBG Smith’s marketing center and Amazon HQ2.

University of Maryland Builds Ties With Amazon

The university is opening a ‘Discovery Center’ at Amazon’s new headquarters in Virginia.
Our biggest risk is thinking too small.

- Glenn Youngkin
  Co-CEO of the Carlyle Group
Continuous Strategic Planning
Annual Milestones Report:
The Virginia Tech Difference

BOARD OF VISITORS
NOVEMBER 17, 2019
Strategic Priority Milestones
**Key Performance Indicator (KPI):**
Extramural Research Expenditures

**Milestone:**
$410 million by 2024

**KPI Definition:**
Research and development expenditures as reported to the National Science Foundation in the annual Higher Education Research and Development (HERD) survey, less expenditures reported as Institutional Funds.

**Notes:**
The FY 2018-19 estimate based on Virginia Tech’s submission to the National Science Foundation.
Key Performance Indicator (KPI):
Times Higher Education (THE) World Universities Ranking

Milestone:
Top 13 U.S. public land-grant by 2024

KPI Definition:
The placement of Virginia Tech by the Times Higher Education World University ranking within the subgroup of all public, Carnegie Class - Very High Research, land-grant universities.

Notes:
In the 2020 THE World University Rankings, Virginia Tech moved up a level from 251-300 to 201-250 ranking globally in the 83rd percentile. Virginia Tech’s historical rankings among all universities are as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>276-300</td>
</tr>
<tr>
<td>2016</td>
<td>251-300</td>
</tr>
<tr>
<td>2017</td>
<td>251-300</td>
</tr>
<tr>
<td>2018</td>
<td>251-300</td>
</tr>
<tr>
<td>2019</td>
<td>251-300</td>
</tr>
<tr>
<td>2020</td>
<td>201-250</td>
</tr>
</tbody>
</table>

Advance Regional, National, and Global Impact
**Key Performance Indicator (KPI):**

**Graduate Student Enrollment**

**Milestone:**

7,900 Master’s and PhD students by Fall 2024, including 4,550 Master’s and 3,350 PhD students

**KPI Definition:**

The headcount total of all students classified as graduate students seeking a Master’s or PhD degree across all campus locations.

**Notes:**

The university also has graduate students earning Doctor of Veterinary Medicine (DVM) and Doctor of Medicine (MD) degrees that are currently not included in the milestone to grow graduate enrollments.
**Key Performance Indicator (KPI):**
Internationally and Nationally Recognized Faculty Awards

**Milestone:**
Top 1/3rd (66th percentile) by 2022

**KPI Definition:**
Awards per faculty as reported annually in the Academic Analytics database.

**Notes:**
Virginia Tech’s percentile placement among the subgroup of all public, Carnegie Class - Very High Research universities has been as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>56th</td>
</tr>
<tr>
<td>2015</td>
<td>57th</td>
</tr>
<tr>
<td>2016</td>
<td>60th</td>
</tr>
<tr>
<td>2017</td>
<td>55th</td>
</tr>
<tr>
<td>2018</td>
<td>56th</td>
</tr>
</tbody>
</table>
**Key Performance Indicator (KPI):**

Internationally and Nationally Recognized Faculty Publications

**Milestone:**
Top 1/3rd (66th percentile) by 2022

**KPI Definition:**
Published articles per faculty based on article counts and faculty counts in the Academic Analytics database.

**Notes:**
Virginia Tech’s percentile placement among the subgroup of all public, Carnegie Class - Very High Research universities has been as follows:

<table>
<thead>
<tr>
<th>Report Year</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Place</td>
<td>60th</td>
<td>58th</td>
<td>59th</td>
<td>55th</td>
<td>32nd</td>
</tr>
</tbody>
</table>

Advance Regional, National, and Global Impact
Key Performance Indicator (KPI):
Internationally and Nationally Recognized Faculty Citations

Milestone:
Top 1/3rd (66th percentile) by 2022

KPI Definition:
Field-Weighted Citation Index (FWCI) indicates how the number of citations received by the university’s publications compares with the average number of citations received by all other similar publications at other universities, indexed in the Scopus database. An FWCI of greater than 1.00 indicates that the publications have been cited more than would be expected based on the world average for similar publications.

Notes:
Virginia Tech’s percentile placement among the subgroup of all public, Carnegie Class - Very High Research universities has been as follows:

<table>
<thead>
<tr>
<th>Report Year</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>1.51</td>
</tr>
<tr>
<td>2014</td>
<td>1.54</td>
</tr>
<tr>
<td>2015</td>
<td>1.48</td>
</tr>
<tr>
<td>2016</td>
<td>1.72</td>
</tr>
<tr>
<td>2017</td>
<td>1.81</td>
</tr>
<tr>
<td>2018</td>
<td>1.46</td>
</tr>
</tbody>
</table>

Advance Regional, National, and Global Impact
**Key Performance Indicator (KPI):**
Underrepresented Minority Students

**Milestone:**
25% representation in the entering class by 2022

**KPI Definition:**
The number of entering students (first year and transfer) who self-identify as one of the underrepresented race/ethnicity categories of Hispanics of any race, Black or African American, Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native, or Two or More Races other than White + Asian divided by the total number of entering students.

**Notes:**
Although the number of entering underrepresented minority students increased by 12.6% between Fall 2018 (1,092 students) and Fall 2019 (1,230 students), the overall entering class increased at a higher rate (20%) over the same period.
Key Performance Indicator (KPI):
Underrepresented Minority or Underserved Students

Milestone:
40% representation in the entering class by 2022

KPI Definition:
The number of entering students (first year and transfer) who self-identify as one of the underrepresented race/ethnicity categories of Hispanics of any race, Black or African American, Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native, or Two or More Races other than White + Asian OR are first-generation student, Pell Grant eligible, or a Veteran, divided by the total number of entering students.

Notes:
Although the number of entering underrepresented minority students or underserved students increased by 17.7% between Fall 2018 (2,391 students) and Fall 2019 (2,814 students), the overall entering class increased at a higher rate (20%) over the same period.
**Key Performance Indicator (KPI):**

Underrepresented Minority Graduate and Professional Students

**Milestone:**

20% representation by 2024

**KPI Definition:**

The number of graduate and professional students who self-identify as one of the underrepresented race/ethnicity categories of Hispanics of any race, Black or African American, Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native, or Two or More Races other than White + Asian divided by the total number of graduate and professional students.
**Key Performance Indicator (KPI):**
Underrepresented Minority Faculty

**Milestone:**
15% representation by 2024

**KPI Definition:**
The number of instructional and research faculty who self-identify as one of the URM race/ethnicity categories of Hispanics of any race, Black or African American, Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native, or Two or More Races other than White + Asian divided by the total number of instructional and research faculty.
**Key Performance Indicator (KPI):**
Female Faculty

**Milestone:**
50% representation by 2024

**KPI Definition:**
The number of instructional and research faculty who self-identify as female divided by the total number of instructional and research faculty.
Key Performance Indicator (KPI):
New Underrepresented Minority Faculty Hires

Milestone:
25% representation by 2022

KPI Definition:
The number of instructional and research faculty hired each year who self-identify as one of the minority race/ethnicity categories of Hispanics of any race, Black or African American, Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native, Asian, or Two or More Races other than White + Asian divided by the total number of instructional and research faculty hired each year. This includes new hires between October 1st of the previous calendar year and September 30th of the current calendar year.

Notes:
This metric excludes existing employees who transitioned into the instructional and research faculty ranks during the indicated time period.
**Key Performance Indicator (KPI):**

**New Female Faculty Hires**

**Milestone:**

50% representation by 2022

**KPI Definition:**

The number of instructional and research faculty hired each year who self-identify as female divided by the total number of instructional and research faculty hired each year. This includes new hires between October 1st of the previous calendar year and September 30th of the current calendar year.

**Notes:**

This metric excludes existing employees who transitioned into the instructional and research faculty ranks during the indicated time period.
**Key Performance Indicator (KPI):**
Instructional Faculty Salaries

**Milestone:**
50th percentile of R1 public land-grants by 2024

**KPI Definition:**
The placement of Virginia Tech's average faculty salary (9-month equated, all instructional ranks as compiled by IPEDS) among the top 20 public, land-grant institutions as ranked in the WSJ/THE national ranking.

**Notes:**
Previously, this metric was benchmarked against SCHEV peers with the goal of the 60th percentile.
**Key Performance Indicator (KPI):**
Four-Year Graduation Rates for Entering Freshmen

**Milestone:**
70% by 2024 (2020 cohort)

**KPI Definition:**
The number of first-year entering students who graduate within four years divided by the total number of entering students in the same entering class.
**Key Performance Indicator (KPI):**

Three-Year Graduation Rates for Transfer Students

**Milestone:**

75% by 2024 (2021 cohort)

**KPI Definition:**

The number of entering transfer students who graduate within three years divided by the total number of entering transfer students in the same entering class.
Key Performance Indicator (KPI):
Auxiliary Maintenance Reserve Funding

Milestone:
Maintain range of 1-1.5% of facility replacement value.

KPI Definition:
The annual Maintenance Reserve budget for the auxiliary enterprises divided by the auxiliary enterprises’ facility replacement values.

Notes:
The percentage drop in fiscal years 2018 and 2019 reflect significant asset additions that abruptly expanded the denominator of the KPI. The university has since modified its practice to smooth the introduction of new assets, which are included in the forward-looking projections.
**Key Performance Indicator (KPI):**

University Debt Ratio

**Milestone:**

Less than or equal to 5%

**KPI Definition:**

The debt burden ratio is the annual debt service (principal plus interest) on long-term debt, excluding commercial paper or other bond anticipation notes, divided by total operating expenses. All amounts are from the audited financial statements and the related footnotes for each fiscal year. Debt service would also exclude all debt service payments for current refunded long-term debt, as well as all debt service payments on advanced refunded long-term debt that have been legally defeased. Additionally, it excludes other long-term obligations related to pensions, other post-retirement obligations, leases, etc.

**Notes:**

FY 2018-19 debt ratio is estimated, pending finalization of the university’s financial statement.
Key Performance Indicator (KPI):
University Unrestricted Net Assets

Milestone:
$20 million additional annually by FY2024

KPI Definition:
The change in unrestricted net assets is the net result of operations (revenues less expenses) for unrestricted funds. Major categories of unrestricted funds include Educational and General, auxiliary enterprises, and recovered facilities and administrative costs but excludes changes due to the implementation of new accounting requirements for net pension liability and obligations for other post employment benefits, and the change in obligations for leases. All amounts are from the audited financial statements and the related footnotes for each fiscal year.
**Key Performance Indicator (KPI):**

Endowment

**Milestone:**

$1.6 billion by FY2022

**KPI Definition:**

The endowment total consists of the Virginia Tech Foundation's consolidated endowment fund plus internal foundation assets that are earmarked for the endowment, but not yet received or liquidated. These include contributions receivable, notes, deeds of trust, gift annuities, real estate partnerships, and other miscellaneous endowed assets.
**Key Performance Indicator (KPI):**
Alumni Giving

**Milestone:**
22% by FY2022

**KPI Definition:**
The percentage of undergraduate degree holding alumni who give a gift in the fiscal year.

**Notes:**
Between FY 2017-18 and 2018-19, the number of alumni donors increased by 5%; however, the number of living alumni continues to grow each year. For FY18, Virginia Tech ranked 9th in the country for donor growth, while two-thirds of institutions saw a decrease in donor counts. The stated goal has been to grow alumni participation from 9% to 22% by 2022.
Key Performance Indicator (KPI):
New Gifts and Commitments

Milestone:
$175 million by FY2023

KPI Definition:
Yearly new gifts and commitments - the total amount of new pledges and outright gifts recorded within the fiscal year.

Notes:
While new gifts and commitments were not tracked prior to FY16, new gifts and commitments were approximately $80M prior to FY16.
Additional Supporting Measures
Key Performance Indicator (KPI):
Wall Street Journal/Times Higher Education (WSJ/THE) US College Rankings

Milestone:
Top 10 U.S. public land-grant by 2024

KPI Definition:
The placement of Virginia Tech by the WSJ/THE national ranking within the subgroup of all public, Carnegie Class - Very High Research, land-grant universities.

Notes:
In the 2020 WSJ/THE US College Rankings, Virginia Tech ranks 105 amongst 800 ranked universities. Virginia Tech’s historical rankings among all universities are as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>134</td>
</tr>
<tr>
<td>2018</td>
<td>123</td>
</tr>
<tr>
<td>2019</td>
<td>106</td>
</tr>
<tr>
<td>2020</td>
<td>105</td>
</tr>
</tbody>
</table>

Advance Regional, National, and Global Impact
**Key Performance Indicator (KPI):**
Undergraduate Student Enrollment

**Milestone:**
30,000 undergraduate students by Fall 2023

**KPI Definition:**
The headcount total of students classified as undergraduates across all campus locations.
**Key Performance Indicator (KPI):**
Countries Represented by International Faculty

**Milestone:**
100 countries by 2024

**KPI Definition:**
The number of countries represented by all faculty who are classified as foreign nationals who are not United States citizens.

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**Fall Faculty Census**

<table>
<thead>
<tr>
<th>Year</th>
<th>Actual</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>76</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>78</td>
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<tr>
<td>2016</td>
<td>80</td>
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<tr>
<td>2017</td>
<td>83</td>
<td></td>
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<tr>
<td>2018</td>
<td>85</td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>88</td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td>93</td>
<td></td>
</tr>
<tr>
<td>2022</td>
<td>95</td>
<td></td>
</tr>
<tr>
<td>2023</td>
<td>98</td>
<td></td>
</tr>
<tr>
<td>2024</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>
**Key Performance Indicator (KPI):**
International Student Representation

**Milestone:**
50% representation from countries outside of the top 2 countries by 2024

**KPI Definition:**
The total number of students who are foreign nationals with citizenship outside of the top two foreign countries divided by the total number of students who are foreign nationals.

**Notes:**
The top 2 countries for Virginia Tech’s international students are China and India. Between Fall 2013 and Fall 2019, enrollment from Chinese citizens increased 60.4% (or, 645 students) and enrollment from Indian citizens increased by 84.4% (or 341 students). Enrollments from all other foreign countries combined increased by 14.4% (or 198 students).
Key Performance Indicator (KPI):
Corps of Cadets Enrollment

Milestone:
1,400 by 2022

KPI Definition:
The number of students who are participants in the Virginia Tech Corps of Cadets.
**Key Performance Indicator (KPI):**

Students in Living Learning Programs

**Milestone:**

67% by 2024

**KPI Definition:**

The number of undergraduate students living in a Living Learning Community divided by the total number of undergraduate students living on-campus.
**Key Performance Indicator (KPI):**
Debt Rating – Moody’s and Standard & Poor’s (S&P)

**Milestone:**
Maintain a rating in the AA range

**KPI Definition:**
The university's current debt ratings as provided by Moody’s and Standard & Poor’s.
Key Performance Indicator (KPI):
SWaM Expenditures – Small Business

Milestone:
10% increase annually by FY22

KPI Definition:
SWAM expenditures are determined by the total expenditures with each category of Virginia Certified SWAM vendors divided by the university’s total discretionary spend. The State recognizes three categories of SWAM vendors currently: Small, Woman Owned and Minority Owned. A vendor must receive certification based on criteria established by the VA Small Business Supplier Development Agency. Each year, by category, a utilization percentage is calculated.
**Key Performance Indicator (KPI):**
**SWaM Expenditures – Woman Owned**

**Milestone:**
10% increase annually by FY22

**KPI Definition:**
SWAM expenditures are determined by the total expenditures with each category of Virginia Certified SWAM vendors divided by the university’s total discretionary spend. The State recognizes three categories of SWAM vendors currently: Small, Woman Owned and Minority Owned. A vendor must receive certification based on criteria established by the VA Small Business Supplier Development Agency. Each year, by category, a utilization percentage is calculated.
**Key Performance Indicator (KPI):**
SWaM Expenditures – Minority Owned

**Milestone:**
10% increase annually by FY22

**KPI Definition:**
SWAM expenditures are determined by the total expenditures with each category of Virginia Certified SWAM vendors divided by the university’s total discretionary spend. The State recognizes three categories of SWAM vendors currently: Small, Woman Owned and Minority Owned. A vendor must receive certification based on criteria established by the VA Small Business Supplier Development Agency. Each year, by category, a utilization percentage is calculated.
**Metrics Still Under Construction**

- Academic Majors with an Experiential Learning Component
- Graduate Programs with Required Cultural Competency Component
- Undergraduate Students Graduating with Two or More Critical Analysis of Equity and Identity Pathways Courses
- Undergraduate Students Graduating with Two or More Intercultural and Global Awareness Pathways Courses
- Student Participation in Hokie Mentorship Connect Program
- College and Unit-Level Strategic Plans

**Metrics Under Review**

- Rural Virginia Initiative
- Administrative & Professional Faculty and Staff Salaries
- Average Student Loan Debt Per Graduating Senior
- Faculty and Staff Satisfaction with Career Advancement Opportunities
- Faculty and Staff Satisfaction with Work-Life Balance
- Underrepresented Minority Staff and Administrative & Professional Faculty
- Number of Invention Disclosure Forms (IDFs)
- Number of Licenses
- Number of Start-ups
Enrollment Update

LUISA M HAVENS GERARDO, PH.D.
VICE PROVOST FOR ENROLLMENT MANAGEMENT
## Overall Enrollment – Targets vs Actuals

<table>
<thead>
<tr>
<th>Category</th>
<th>Target</th>
<th>Actual</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Associate/Unclassified</td>
<td>219</td>
<td>216</td>
<td>(3)</td>
</tr>
<tr>
<td>New Freshman</td>
<td>6,600</td>
<td>7,604</td>
<td>1,004</td>
</tr>
<tr>
<td>New Transfers</td>
<td>1,250</td>
<td>1,116</td>
<td>(134)</td>
</tr>
<tr>
<td>Continuing UG</td>
<td>20,748</td>
<td>20,314</td>
<td>(434)</td>
</tr>
<tr>
<td>Off campus UG</td>
<td>50</td>
<td>50</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total Undergraduate</strong></td>
<td>28,867</td>
<td>29,300</td>
<td>433</td>
</tr>
<tr>
<td>Graduate</td>
<td>4444</td>
<td>4382</td>
<td>(62)</td>
</tr>
<tr>
<td>Off campus GR</td>
<td>1926</td>
<td>2032</td>
<td>106</td>
</tr>
<tr>
<td><strong>Total Graduate</strong></td>
<td>6,370</td>
<td>6,414</td>
<td>44</td>
</tr>
<tr>
<td>Vet Med</td>
<td>498</td>
<td>499</td>
<td>1</td>
</tr>
<tr>
<td>VTCSOM</td>
<td>169</td>
<td>170</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total Enrollment-all-levels</strong></td>
<td>35,904</td>
<td>36,383</td>
<td>479</td>
</tr>
</tbody>
</table>
New Degree-Seeking Undergraduate Enrollment

First-Time Freshmen

<table>
<thead>
<tr>
<th>Year</th>
<th>In State</th>
<th>Out of State</th>
<th>International</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>1635</td>
<td>438</td>
<td>477</td>
<td>2047</td>
</tr>
<tr>
<td>2016</td>
<td>1306</td>
<td>297</td>
<td>477</td>
<td>2047</td>
</tr>
<tr>
<td>2017</td>
<td>1947</td>
<td>419</td>
<td>477</td>
<td>2047</td>
</tr>
<tr>
<td>2018</td>
<td>1542</td>
<td>419</td>
<td>477</td>
<td>2047</td>
</tr>
<tr>
<td>2019</td>
<td>2047</td>
<td>507</td>
<td>477</td>
<td>2047</td>
</tr>
</tbody>
</table>
New Degree-Seeking Undergraduate Enrollment

Undergraduate Transfers

Fall Term (Week of Final Census)

In State
Out of State
International
Overall

2015 2016 2017 2018 2019

0 50 100 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850 900 950 1000 1050 1100 1150
Total Undergraduate Enrollment - on-campus

[Graph showing total undergraduate enrollment on-campus from 2015 to 2019, with specific data points for different categories such as In State, Out of State, International, and Overall.

- In State: 5782, 5657, 6136, 6248, 6685
- Out of State: 1501, 1540, 1797, 1878, 2005
- International: 18035, 18544, 19207, 19632, 20560

Overall: 25318, 25741, 27140, 27758, 29250]
Underrepresented Minorities (URM) Enrollment

All Undergraduates

Fall Term (Week of Final Census)

In State
Out of State
Overall

14.5%
URM or USS Enrollment

All Undergraduates

<table>
<thead>
<tr>
<th>Year</th>
<th>In State</th>
<th>Out of State</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>1484</td>
<td>1444</td>
</tr>
<tr>
<td>2016</td>
<td>1444</td>
<td>1464</td>
</tr>
<tr>
<td>2017</td>
<td>1525</td>
<td>1464</td>
</tr>
<tr>
<td>2018</td>
<td>1525</td>
<td>1567</td>
</tr>
<tr>
<td>2019</td>
<td>1567</td>
<td></td>
</tr>
</tbody>
</table>

34%
### Undergraduate Graduation Trends

<table>
<thead>
<tr>
<th></th>
<th>17-18 graduates</th>
<th>Ratio</th>
<th>18-19 graduates</th>
<th>Ratio</th>
<th>N diff</th>
<th>% diff</th>
</tr>
</thead>
<tbody>
<tr>
<td>OOS</td>
<td>1,487</td>
<td>26%</td>
<td>1,815</td>
<td>28%</td>
<td>328</td>
<td>22%</td>
</tr>
<tr>
<td>IS</td>
<td>4,266</td>
<td>74%</td>
<td>4,667</td>
<td>72%</td>
<td>401</td>
<td>9%</td>
</tr>
<tr>
<td>Total</td>
<td>5,753</td>
<td></td>
<td>6,482</td>
<td></td>
<td>729</td>
<td>13%</td>
</tr>
</tbody>
</table>
Undergraduate Trends – 4-yr graduation rate

<table>
<thead>
<tr>
<th>Year</th>
<th>URM or USS</th>
<th>URM</th>
<th>USS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>66.2%</td>
<td>67%</td>
<td>62.3%</td>
</tr>
<tr>
<td>2018</td>
<td>64.7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>64.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Undergraduate Trends – 6-yr graduation rate

<table>
<thead>
<tr>
<th>Year</th>
<th>URM or USS</th>
<th>URM</th>
<th>USS</th>
<th>Neither URM nor USS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>82%</td>
<td>78.1%</td>
<td>82%</td>
<td>87.5%</td>
</tr>
<tr>
<td>2018</td>
<td>84.4%</td>
<td>78.1%</td>
<td>82%</td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>83.7%</td>
<td>78.1%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Undergraduate Trends – retention rate

<table>
<thead>
<tr>
<th></th>
<th>Overall</th>
<th>URM</th>
<th>USS</th>
<th>URM or USS</th>
<th>Neither URM/USS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Freshmen</strong></td>
<td>92.6%</td>
<td>90.8%</td>
<td>89.3%</td>
<td>90%</td>
<td>93.8%</td>
</tr>
<tr>
<td><strong>Diff from overall</strong></td>
<td>-1.8</td>
<td>-3.3</td>
<td>-2.6</td>
<td>+1.2</td>
<td></td>
</tr>
<tr>
<td><strong>Transfer</strong></td>
<td>89.3%</td>
<td>88.6%</td>
<td>89.2%</td>
<td>89.8%</td>
<td>88.9%</td>
</tr>
<tr>
<td><strong>Diff from overall</strong></td>
<td>-0.7</td>
<td>-0.1</td>
<td>+0.5</td>
<td>-0.4</td>
<td></td>
</tr>
</tbody>
</table>
## Undergraduate Trends – time to degree

<table>
<thead>
<tr>
<th></th>
<th>Overall</th>
<th>URM</th>
<th>USS</th>
<th>URM or USS</th>
<th>Neither URM/USS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshmen</td>
<td>4.02</td>
<td>4.12</td>
<td>4.09</td>
<td>4.1</td>
<td>3.99</td>
</tr>
<tr>
<td>Diff from overall</td>
<td>+0.10</td>
<td>+0.07</td>
<td>+0.08</td>
<td>-0.03</td>
<td></td>
</tr>
<tr>
<td>Transfer</td>
<td>2.86</td>
<td>2.89</td>
<td>2.96</td>
<td>2.95</td>
<td>2.77</td>
</tr>
<tr>
<td>Diff from overall</td>
<td>+0.03</td>
<td>+0.10</td>
<td>+0.09</td>
<td>-0.09</td>
<td></td>
</tr>
</tbody>
</table>
Total Graduate Enrollment – on-campus

Graduate Students

- In State
- Out of State
- International
- Overall

Fall Term (Week of Final Census)

<table>
<thead>
<tr>
<th>Year</th>
<th>Overall</th>
<th>In State</th>
<th>Out of State</th>
<th>International</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>4793</td>
<td>1909</td>
<td>1642</td>
<td>1242</td>
</tr>
<tr>
<td>2016</td>
<td>4860</td>
<td>1996</td>
<td>1686</td>
<td>1178</td>
</tr>
<tr>
<td>2017</td>
<td>4663</td>
<td>1877</td>
<td>1656</td>
<td>1130</td>
</tr>
<tr>
<td>2018</td>
<td>4444</td>
<td>1782</td>
<td>1543</td>
<td>1119</td>
</tr>
<tr>
<td>2019</td>
<td>4382</td>
<td>1796</td>
<td>1435</td>
<td>1151</td>
</tr>
</tbody>
</table>
2020 Planning

- Predictive model for new students – 82% accuracy
- Forecast model for continuing students – 99% accuracy
- Initial planning meeting with each college to determine capacity for academic programs
- Housing/residence hall capacity provided by Student Affairs
- Currently vetting enrollment scenarios with budget office to finalize proposal to provost and president
2020 Planning

As a result of a two-year investigation by the Antitrust Division of the US DOJ, the National Association for College Admission Counseling (NACAC) has changed the Code of Ethics and Professional Practice (CEPP). The following sections of the code no longer apply:

- Colleges **must not offer incentives** exclusive to students applying or admitted under an Early Decision application plan. Examples of incentives include the promise of special housing, enhanced financial aid packages, and special scholarships for Early Decision admits.

- Colleges **will not knowingly recruit or offer enrollment incentives** to students who are already enrolled, registered, have declared their intent, or submitted contractual deposits to other institutions. May 1 is the point at which commitments to enroll become final, and colleges must respect that.

- Colleges **must not solicit transfer applications from a previous year’s applicant** or prospect pool unless the students have themselves initiated a transfer inquiry or the college has verified prior to contacting the students that they are either enrolled at a college that allows transfer recruitment from other colleges or are not currently enrolled in a college.
discussion
Constituent Report by
Undergraduate Student Representative
to the Board, Ms. Madelynn Todd,
will be presented at Sunday’s
Information Session
Constituent Report by Graduate Student Representative to the Board, Mr. Ryan King, will be presented at Sunday’s Information Session
Constituent Report by President of Faculty Senate, Dr. John Ferris, will be presented at Sunday’s Information Session
Constituent Report by President of Staff Senate, Ms. Tamarah Smith, will be presented at Sunday’s Information Session
Virginia Tech is a public land-grant university, committed to teaching and learning, research, and outreach to the Commonwealth of Virginia, the nation, and the world community. Learning from the experiences that shape Virginia Tech as an institution, we acknowledge those aspects of our legacy that reflected bias and exclusion. Therefore, we adopt and practice the following principles as fundamental to our on-going efforts to increase access and inclusion and to create a community that nurtures learning and growth for all of its members:
WE AFFIRM

- the inherent dignity and value of every person and strive to maintain a climate for work and learning based on mutual respect and understanding.

- the right of each person to express thoughts and opinions freely. We encourage open expression within a climate of civility, sensitivity, and mutual respect.

- the value of human diversity because it enriches our lives and the University. We acknowledge and respect our differences while affirming our common humanity.
all forms of prejudice and discrimination, including those based on age, color, disability, gender, gender identity, gender expression, national origin, political affiliation, race, religion, sexual orientation, and veteran status. We take individual and collective responsibility for helping to eliminate bias and discrimination and for increasing our own understanding of these issues through education, training, and interaction with others.
WE PLEDGE

- our collective commitment to these principles in the spirit of the Virginia Tech motto of *Ut Prosim* (That I May Serve).