

**Welcome to Virginia Tech
Virginia Loggers Association!**

**We Are Glad You Are Here!
Thank You for What You Do Working Within
The Forestry Sector
August 17-20, 2017**

**Dr. Paul Winistorfer, Dean
College of Natural Resources and Environment**



Classes begin August 28 and soon campus will be bustling with energy, and enthusiasm. It is a transformation time for our entering freshman students. Do you remember?

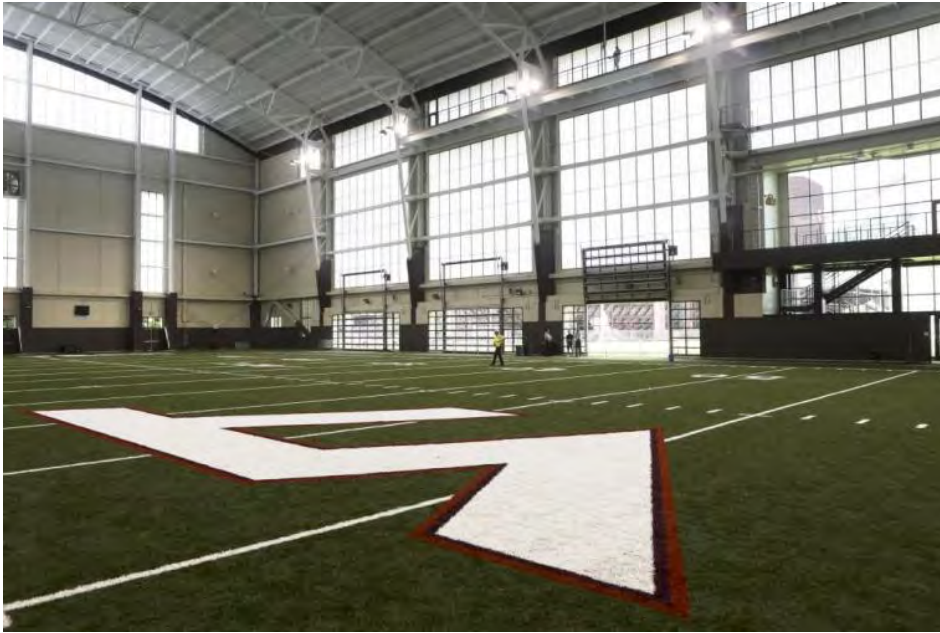
We had a record 27,266 applications for fall 2017. We are pleased that a Virginia Tech education is in high demand and that more than 6,000 students accepted our offer to be a part of our university community. With its stellar record of academic excellence and affordability, Virginia Tech has the reputation and degree programs that matter in today's job market. It is gratifying that so many motivated, bright, and high-achieving students and their families chose Virginia Tech.



New Classroom Building Opened Fall 2016 and CNRE
is delivering Classes in this New Building



Other New and Interesting Facilities on Campus



Indoor Practice Facility



Rolls Royce Engine hangs in
atrium of Goodwin Hall!

Moss Performing Arts Center



Not to be outdone – our students in packaging systems and design constructed a new building of their own during the Shak-A-Thon Habitat for Humanity Fund-Raiser event last spring!



CNRE Built a new \$750,000 Research Aviary Dedicated in 2016.



Julian Cheatham Hall Remain the Administrative Home to the College of Natural Resources and Environment, formerly the College of Forestry and Wildlife



September 15-16, 2017
Register Today from Our Homepage at cnre.vt.edu!!





Thank you Dr. John Hosner for Your Vision to Establish the College.
We are prospering today from the seed you planted 25 years ago!
Thank you to my faculty and staff who are outstanding in every way!

For the third year in a row, *USA Today College Edition* ranked Virginia Tech as the nation's best for studying natural resources and conservation. Our forestry program was ranked #1 in the same study. Our new packaging systems degree was recently ranked #7 out of the top 20 programs nationally by *Value Colleges*!

Higher Education Today

...context is critical to our strategy for success, whether a private business enterprise or higher education

- “As an industry, higher education is undergoing significant change. Competition continues to increase for the best students and top faculty, as well as for funding, donor dollars, leadership, and reputation. Additionally, public universities are having a harder time communicating what it means to be “public,” particularly as state and federal funding decreases.”
 - *This point of view is provided by Ologie, a branding firm focused on higher education.*



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- Cost of education dominates the U.S. landscape. Student loans have soared into the trillions. Many families have more savings in 529 educational plans than they do in retirement savings. Student default and government forgiveness on loans is increasing.
- Disruptive business models have entered the traditional education delivery system, including private-for-profit education, on-line education, free community college, and the rise and fall of massively open-online courses (MOOCs). Students can get a BS degree today without ever stepping on a university campus.
- K-12 is also changing and the access into these universities has become a more narrow and highly competitive passageway. Advanced Placement (AP) courses allow students to enter the university with sometimes as many as 30 credit hours earned in high school.

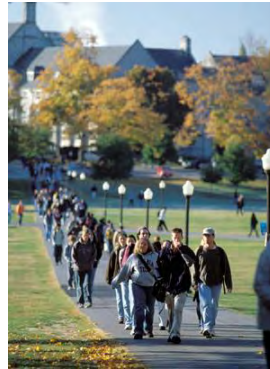
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- Universities compete globally for the best faculty talent. Universities compete for the best student talent, locally, regionally, nationally, and yes – globally. Out-of-state students pay more than the full cost of education – they subsidize in-state students.
- We face an uncertain future in the federal research arena at a time when expectations for faculty engagement in research and scholarship are reaching new highs. Will the USDA, Department of Interior, Forest Service, Fish and Wildlife Service and other federal agencies be able to fund forestry research in the future?
- More than ever, higher education institutions are looking for partnerships with individuals, alumni, and the private sector to align resources with the research, teaching, and outreach missions of the institution

Virginia Tech Today

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- The Commonwealth's Land Grant Institution
- \$1.5 billion dollar budget enterprise
- 7,600 faculty and support staff
- Virginia Tech offers more than 100 undergraduate degree programs and more than 150 MA, MS, and PhD degrees
- Total enrollment on and off campus is 33,170.
- Ranked #44 in the nation in National Science Foundation Research Expenditures
- Virginia Tech-Carilion Medical School, Virginia Tech-Carilion Medical Research Institute – a successful public/private partnership

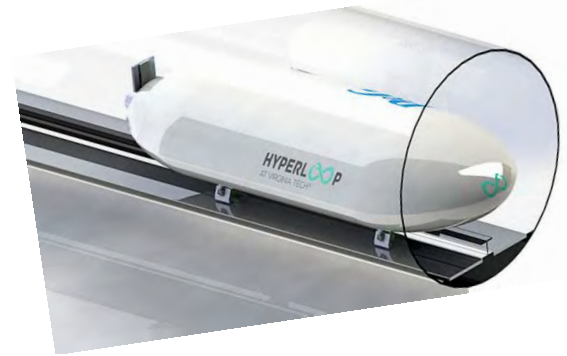
Applications/Demand for a VT Degree

Virginia Tech received a record 27,266 applications for the fall 2017 freshman class. 348 applications (1.2%) were received/304 offers were extended to students interested in CNRE

The freshman class will be about 6250.

65% of all applications were for the College of Engineering.

VT will grow its undergraduate enrollment by 5,000 students by 2022



Enrollment by College

Fall 2016

	Undergraduate	Graduate	Professional	Total
Agriculture & Life Sciences	2,800	427	0	3,227
Architecture & Urban Studies	1,569	313	0	1,882
Business	4,116	139	0	4,255
Engineering	7,906	2,083	0	9,989
Liberal Arts & Human Sciences	3,372	695	0	4,067
Natural Resources & Environment	821	167	0	988
Science	3,839	614	0	4,453
Veterinary Medicine	0	137	489	626
Intercollege	1,318	285	0	1,603

CNRE will grow to 1200 undergraduate students by 2022

Higher Education Today

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- We want the right to practice forestry and natural resources at a Research Intensive, Land Grant State University with growing global aspirations, a complex array of competing interests and emerging academic programs, and heightened expectations for externally funded research, while serving the citizens of our state, educating the next generation, contributing to the wise management and utilization of our natural resources, and supporting the economic, social, and environmental well-being of the Commonwealth.

What is our strategy to retain this privilege at Virginia Tech and at other US institutions?

External Environment of Forestry and Natural Resources Today

Contraction of the vertically integrated forestry companies.

Selling timberland holdings; rise of the REITS.

Growing interests in carbon.

Renewable energy and energy policies globally.

Recognition and value of ecosystem services.

Water quality and quantity.

Globalization.

Technological innovation and advancement.

The Millennials.



Nomenclature and Naming Matter

New College and Department Names

- College of Natural Resources and Environment
- Forest Resources and Environmental Conservation
- Sustainable Biomaterials
- Fisheries and Wildlife Conservation
- Geography

Department of Fish and Wildlife Conservation

• **Wildlife Conservation**

• **Fish Conservation**

- – *Freshwater Fisheries Conservation track*
- – *Marine Fisheries Conservation track*

Department of Geography

• **Meteorology**

• **Geography**

Department of Sustainable Biomaterials

• **Packaging and Systems Design**

• **Sustainable Biomaterials**

- – *Sustainable Enterprise track*
- – *Creating Sustainable Society track*
- – *Sustainable Residential Structures track*

Department of Forest Resources and Environmental Conservation

• **Environmental Informatics**

• **Environmental Resources Management**

- – *Environmental Resource Management option*
- – *Watershed Management option*

• **Forestry**

- – *Forest Operations and Business option*
- – *Forest Resource Management option*
- – *Urban Forestry option*

• **Natural Resources Conservation**

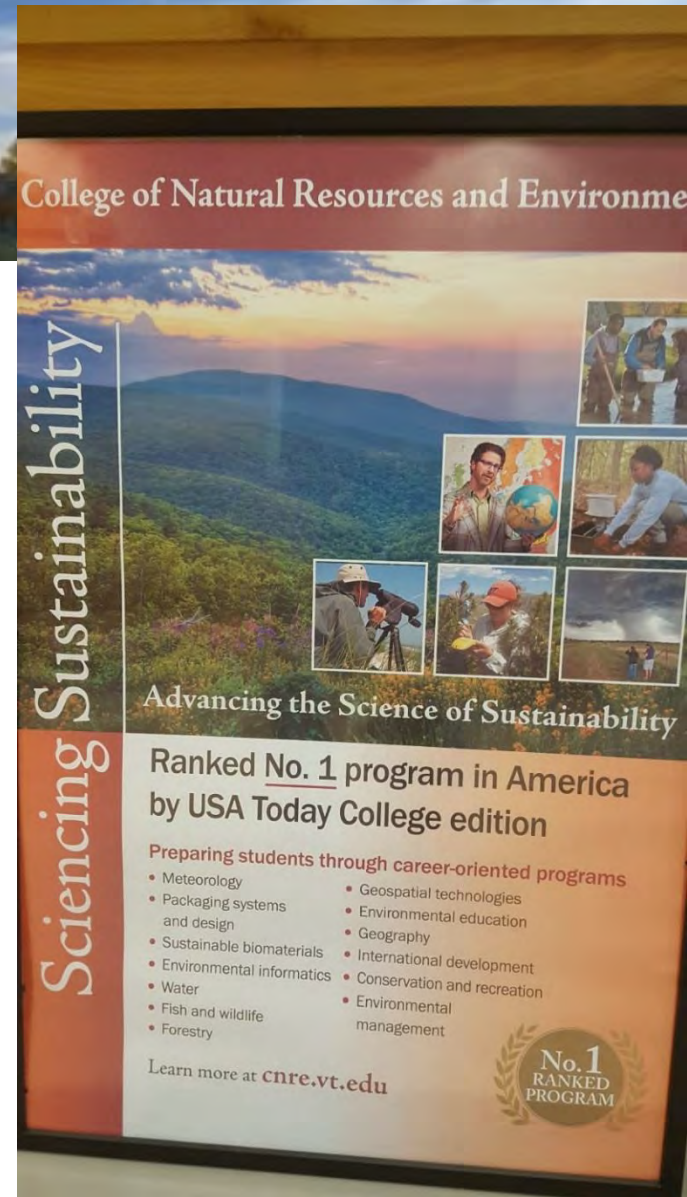
- – *Conservation and Recreation Management option*
- – *Environmental Education option*
- – *Natural Resources Science Education option*

• **Water: Resources, Policy, and Management (B.S.)**

Today Our Degree Programs Look Like This

Measuring the Impact

- Student enrollment has increased by over 65% since fall 2009; 925 undergraduate students today.
- 15 new faculty positions have been added over past 6 years.
- Research funding has increased by over 50%



College of Natural Resources and Environment

Sustainability

Scienicing

Advancing the Science of Sustainability

Ranked **No. 1** program in America
by USA Today College edition

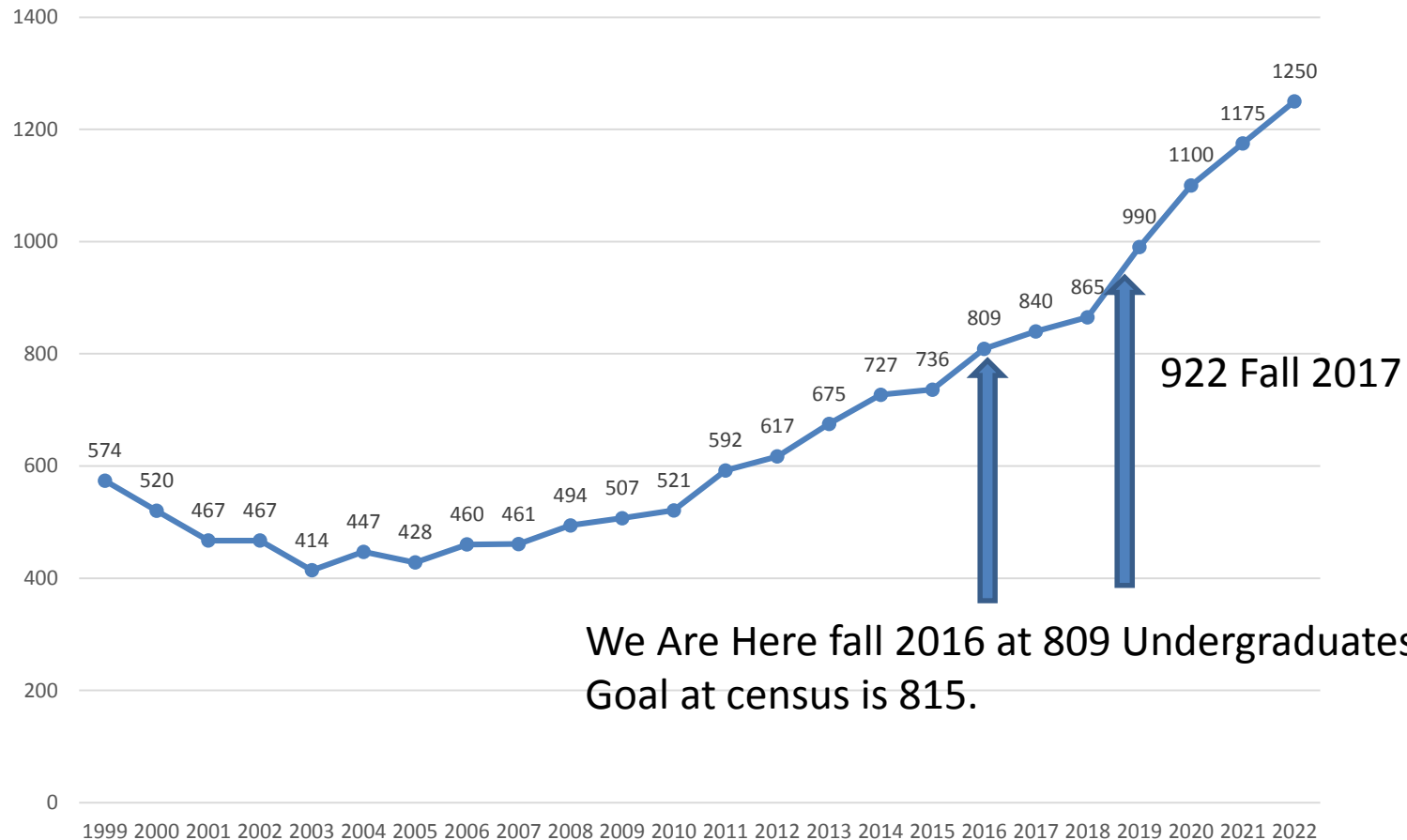
Preparing students through career-oriented programs

- Meteorology
- Packaging systems and design
- Sustainable biomaterials
- Environmental informatics
- Water
- Fish and wildlife
- Forestry
- Geospatial technologies
- Environmental education
- Geography
- International development
- Conservation and recreation
- Environmental management

Learn more at cnre.vt.edu

No. 1 RANKED PROGRAM

CNRE UNDERGRADUATE ENROLLMENT 1999-2017 (2009-2017 ARE FALL CENSUS DATA)



Undergraduate enrollment is important to our future at Virginia Tech

* These are numbers as of 8/14/17; enrollment will increase with internal transfers in September

Will we need new or additional degree offerings to reach our goal by 2022? How do we scale faculty, collegiate faculty, instructors, GTA, and staff support? We must be proactive.

Enrollment Growth is Our #1 Priority Now and Through 2022

The Advising Center is central to our growth priorities.

Enrollment as of 8/14/2017 and Comparison to Previous Years (2013-2017)

				Preliminary					Final
Major College	Student Level**			As of 8/05/2013	As of 8/04/2014	As of 8/03/2015	As of 8/01/16	As of 8/07/17	Fall 2016 Census
Natural Resources and Environment	UG	Fresh	First-Time Freshmen	103	94	113	130	157	131
			Continuing/Returning Freshmen	20	16	9	21	22	16
			Entering Freshmen Transfers	3	2	2	4	9	4
		Soph	Continuing/Returning Sophomores	158	111	127	164	173	165
			Entering Sophomore Transfers	19	24	14	21	28	18
		Jr	Continuing/Returning Juniors	192	240	173	211	247	217
			Entering Junior Transfers	14	12	17	17	11	22
		Sr	Continuing/Returning Seniors	198	219	275	236	274	247
			Entering Senior Transfers	2	0	1	0	0	0
		Non-Degr	Unclassified/Non-Degree UGs	1	1	0	1	1	1
	Total Undergraduates			710	719	731	805	922	821
	GR	Mast	Entering Masters Students	22	16	13	29	24	34
			Continuing/Returnin g Masters	44	38	36	25	52	53
		Doct	Entering Doctoral Students	5	6	3	6	2	9
			Continuing/Returnin g Doctoral	47	29	35	35	48	71
	Total Graduate Students			118	89	87	95	126	167
	Total College			828	808	818	900	1,048	988

CNRE has **two of the top ten research award academic departments at VT**. FWC is #5 and FREC is #8. CNRE set a college all time high at over \$21 million year ending June 30, 2016.

Department	College	Fiscal Year	Award Total
1. Mechanical Engineering	College of Engineering	2016	18,864,636.46
2. Electrical and Computer Engineering	College of Engineering	2016	15,118,527.59
3. Computer Science	College of Engineering	2016	10,710,216.74
4. Civil & Environmental Engineering	College of Engineering	2016	9,914,357.73
5. Fish and Wildlife Conservation	Natural Resources	2016	8,921,883.63
6. Chemistry	College of Science	2016	8,159,846.35
7. Biomedical Engineering & Mechanics	College of Engineering	2016	8,092,559.50
8. For Resources & Environ Consv	Natural Resources	2016	7,050,827.17
9. Aerospace and Ocean Engineering	College of Engineering	2016	5,297,792.66
10. Animal and Poultry Sciences	Agriculture & Life Sciences	2016	5,195,282.79
11. Biological Sciences	College of Science	2016	4,959,242.05
12. Materials Science & Engineering	College of Engineering	2016	4,333,441.15
13. Industrial and Systems Engineering	College of Engineering	2016	3,727,442.00
14. Biochemistry	Agriculture & Life Sciences	2016	3,660,783.00
15. Entomology	Agriculture & Life Sciences	2016	3,410,280.85
16. Mining and Minerals Engineering	College of Engineering	2016	3,357,114.21
17. Crop & Soil Environmental Science	Agriculture & Life Sciences	2016	3,115,437.71
18. Biological Systems Engineering	Agriculture & Life Sciences	2016	3,015,211.00
19. Conservation Management Institute	Natural Resources	2016	2,884,333.00
20. Physics	College of Science	2016	2,799,026.71
21. Chemical Engineering	College of Engineering	2016	2,224,284.00
22. Human Nutrition, Foods & Exercise	Agriculture & Life Sciences	2016	1,980,379.52
23. Psychology	College of Science	2016	1,659,322.00
24. Food Science and Technology	Agriculture & Life Sciences	2016	1,643,253.95
25. Dairy Science	Agriculture & Life Sciences	2016	1,552,582.61

NSF and NIH are now in our top ten agency funders in CNRE

College	Fiscal Year	Award Total
Natural Resources	2016	21,240,481.50

Challenges/Opportunities/Changes Will Continue in CNRE

In the next 5-7 years up to 25 faculty will be eligible to retire from CNRE/VT. We are looking deeply into our faculty and staff demographic to better understand the impacts to our programs from these changes.

Most opportunistic time in the college history to purposefully create our future.

- **Aging and crowded CNRE infrastructure will impede our growth and impacts moving forward. We MUST address our infrastructure needs.**

We must recognize the changes that are coming and prepare for them.

How Can You Help Us See What's Beyond the Horizon?

Can We Use Your Eyes and Ears to Help Us Be More Successful, More Impactful, More Relevant, More Visionary, Better at Execution?

A Commitment to Creating the Future!



“The best way to predict your future is to create it!”

Abraham Lincoln

