



OLD DOMINION
UNIVERSITY

SCHEV COUNCIL MEETING

Tuesday, March 23, 2021

**PRESIDENT JOHN R.
BRODERICK**



ODU HIGHLIGHTS



- ODU awards the second -largest percentage of degrees in STEM -H (science, technology, engineering, math and health) fields among Virginia's doctoral universities. ODU also enrolls more African Americans than any other state - supported, four -year institution in Virginia, which contributes to diversifying the STEMH talent pipeline.
- ODU's Center for Educational Partnerships received a \$25 million Investing in Innovation (i3) grant from the U.S. Department of Education to implement technology -enriched mathematics classroom instruction in high -needs schools.
- Every year, ODU hosts 80 rising 9th- and 10th-graders at the Virginia Space Grant Consortium -funded BLAST (Building Leaders to Advance Science and Technology) summer experience.
- More than 40 faculty members conduct research and outreach to expand STEMH in K-12 and graduate training.
- During the pandemic, ODU launched the Remote Experience for Young Engineers and Scientists (REYES) virtual learning program to increase science literacy, inspire and train future generations of STEM -H students. The program's 70+ lectures and activities attracted more than 7,300 registrants from 115 countries.



STEMH

RESEARCH PARTNERSHIPS

- Longstanding research collaboration with NASA. ODU engineering student -designed CubeSat launched from NASA Wallops Flight Facility and the International Space Station.
- ODU and Virginia Tech announced the creation of the Virginia SmallSat Data Consortium to advance space and satellite technologies, services and data.
- Enhanced partnership with Port of Virginia to help plot its future.
- Largest research partner of Jefferson Lab.
- Closer connections with Eastern Virginia Medical School resulted in joint research on techniques for sepsis cure, which drew worldwide attention .





RESEARCH

MARITIME & PORT LOGISTICS

- ODU is the only university in the U.S. that offers an undergraduate major in maritime and supply chain management.
- ODU is one of only two universities offering an undergraduate maritime major.
- The Naval Engineering and Marine Systems Institute has attracted more than \$3M in grants from partners such as the Office of Naval Research, Department of Defense and the shipbuilding industry.
- ODU and LAVLE USA announced a new \$12M, 22,000-square-foot Marine Electric Propulsion Simulation Lab in Newport News to develop marine electric propulsion, advanced energy storage, autonomous systems and more.
- ODU launched the OpenSeas Technology Hub in Norfolk to innovate in maritime trade, transportation, logistics and BlueTech products and services.

RESEARCH

COMMERCIALIZATION

- **\$41.6M stock payout** for Pulse Biosciences, a company created to pursue cancer -fighting discoveries at the Frank Reidy Research Center for Bioelectrics
- **ODU's most successful commercialization effort, and one of the largest** for a Virginia university



RESEARCH

- ODU has more than 10 years of leadership in coastal resilience research, education and outreach.
- ODU, W&M and VIMS established the Commonwealth Center for Recurrent Flooding to provide technical and scientific assistance to the state and localities.
- ODU recently convened a meeting of 15 universities to develop a national coastal resilience agenda.
- Launched Institute for Coastal Adaptation and Resilience (ICAR):
 - Interdisciplinary, research -based approach to addressing pressing issues for regional coastal communities
 - Jessica Whitehead appointed Joan Brock Endowed Executive Director of ICAR



BUILDINGS

New Buildings

- State-of-the-art, five-story Education Building, which serves as southern entrance to campus
- Broderick Dining Commons, named for Kate and John R. Broderick at the request of student leaders for spearheading inclusion initiatives and their commitment to student success.
- Mitchum Basketball Performance Center, 25,000 - square-foot practice facility for men's and women's teams
- Child Study Center
- Barry Art Museum
- Hugo Owens Residence Hall
- S.B. Ballard Stadium
- Chemistry Building

New Facilities Under Construction

- Health Sciences and Biology buildings are in development.



HIGHER EDUCATION STRENGTHS AND OPPORTUNITIES



Strengthening Partnerships // Universities

- Online Virginia Network + GMU
- Higher Education Centers + NSU
- Commonwealth Center for Recurrent Flooding Resiliency + VIMS + W&M
- Joint new School of Public Health (ODU, NSU and EVMS):
 - Programs will be more closely aligned with other health -care partners in the region.
 - Focus on tackling health inequities and improving social determinants of health in underserved communities .



Strengthening Partnerships // Community Colleges

- Embrace strong partnerships with two - year institutions:
 - ODU enrolls new students from all 24 community colleges in Virginia
 - More than half of ODU students are transfers
- Make student success a priority:
 - Guaranteed Access Agreement (GAA) for transfer students to receive early advising
 - ODU offers the most transfer pathways of any Virginia institution
 - Students can apply up to 90 community college credits to their ODU degree.
 - Strategic use of faculty/staff expertise, physical space and virtual resources support students wherever they are



Strengthening Partnerships // Community Colleges

Recent Collaborations:

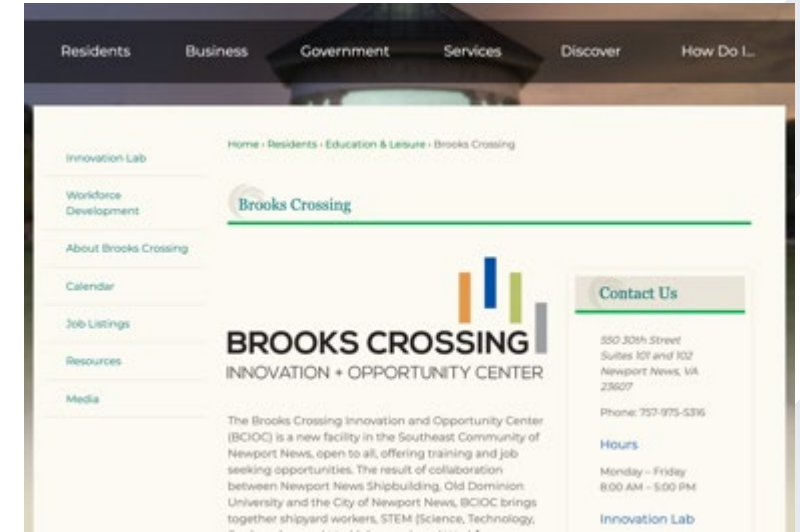
- National Science Foundation Cyber Security LeADERS Grant – ODU + TCC + TNCC
- Tech Talent Pipeline – Partnerships with faculty from ODU, community colleges, and high schools promote computer science, computer engineering and cybersecurity
- Hampton Roads Strategic Transfer Alliance – Supports and prepares ODU applicants not yet ready for a four-year university
- ODU Military Connection Center + TCC Center for Military & Veterans Education
- “Reverse Transfer” Software Implementation – ODU + VCCS student record access for increased awarding of associate’s degrees
- Online Virginia Network – ODU + VCCS
- Transfer VA Partnership
- Guaranteed Access Agreement (GAA)
- ODU + NOVA Partnership – Peer connections and recruitment program
- ODU’s National Center for Social Mobility – Hosts events and workshops for VCCS
- Transfer pathways and curriculum roadmaps
- Ongoing support to potential VCCS transfer students



Strengthening Partnerships // Business & Industry

ODU Brooks Crossing Innovation + Opportunity Center in Newport News:

- ODU has invested countless hours and \$600K+ to create, alongside its partners at Newport News Shipbuilding and the City of Newport News, a hands -on STEM experience to reach underserved neighborhoods of the Newport News community.
- In its first year of operation, even though set back by the pandemic, the Brooks Crossing Innovation Lab (iLab) hosted 157 live and virtual training and educational sessions to bring a hands -on STEM experience to over 2,000 students, teachers, and Newport News community member participants.
- During the height of the pandemic, Brooks Crossing Innovation Lab (iLab) manufactured more than 100 3D -printed facemasks to be used by Sentara Norfolk General Emergency personnel and CHKD staff. In addition, the iLab produced more than 70 3D -printed masks for distribution by City of Newport News employees to promote census enumeration.



Strengthening Partnerships //

Better Partners with Neighboring Cities and Towns

School of Nursing in Virginia Beach:

- In 2018, announced major expansion of School of Nursing into VABeachBio Corridor.
- Embraces emerging technologies and addresses critical shortage of health - care providers in the Commonwealth
- Introduced high -demand graduate programs in Virginia Beach such as telehealth
- Expanded programs in the Schools of Nursing and Community & Environmental Health
- Brought additional 850 students and 62 faculty members to Virginia Beach
- Opened new Center for Telehealth Education and Research



Strengthening Partnerships //

Better Partners with Neighboring Cities and Towns

Institute for Innovation & Entrepreneurship:

- Leverages the area's assets and needs to support the development and global deployment of innovative solutions
- Builds lasting relationships between industry and academia to improve society and revitalize economy
- Partners and connects with business and industry for research, venture creation, consulting, and student engagement activities
- Key partner of the NATO Hub in creating and managing innovation
- Launched Open Seas Technology Innovation Hub:
 - Regional center for innovation and commercialization across resilience
 - Partnership with VIMS + W&M
 - Affiliated with national and international centers associated with high -volume ports
 - NATO partnered with ODU for its first fully online war game. The disruptive technology experiment (DTEX) is a new style of war game designed to quickly test ideas and technologies that can solve problems for NATO.



Strengthening Partnerships //

Better Partners with Neighboring Cities and Towns

Barry Art Museum:

- \$37 million gift from Richard and Carolyn Barry, the largest in ODU's history, for creation of a 24,000-square-foot art museum
- A major cultural destination in Hampton Roads
- Educational and cultural resource for students, faculty, staff and the Hampton Roads community
- Advances the understanding of art in its many diverse forms through collecting, display, interpretation, and research
- Collection encompasses 100+ sculptural objects by such internationally renowned artists as Dale Chihuly, Lino Tagliapietra, Harvey Littleton, Howard Ben Tré and more



Strengthening Partnerships // Better Partners with Neighboring Cities and Towns

Strome Entrepreneurial Center:

- Created thanks to an \$11 -million gift from the Strome Family Foundation
- Fuels an economic engine for the Hampton Roads region
- Collaborative space provides ideas to market support for student entrepreneurs
- Centerpiece for a campus -wide entrepreneurial curriculum, with courses offered in every ODU college.
- Student entrepreneurs have launched dozens of new companies. Success stories include 3D Xtremes and Pull Start Fire
- Launched “THE Monarch Way” on - campus retail store for student entrepreneurs. Store serves as a learning lab for budding entrepreneurs



Military

- 25% of ODU students are military - affiliated
- Old Dominion University earned a top 10 ranking as a Military Friendly School
- Military Connection Center assists veterans, including active -duty service members, reservists, guard members and their families to successfully navigate the transition to academic life
- “Military to ODU” Transition Program
- Peer Advisors for Veterans Education (PAVE)– peer support program
- VetSuccess – Partnership between the U.S. Department of Veterans Affairs and ODU to assist military -affiliated students make a smooth transition to college
- Veterans Business Outreach Center – Entrepreneurial development services for veteran entrepreneurs and small business owners
- Member of the Virginia Training and Education Alliance



**RICHARD
GEORGE**

INSIDE VIRGINIA

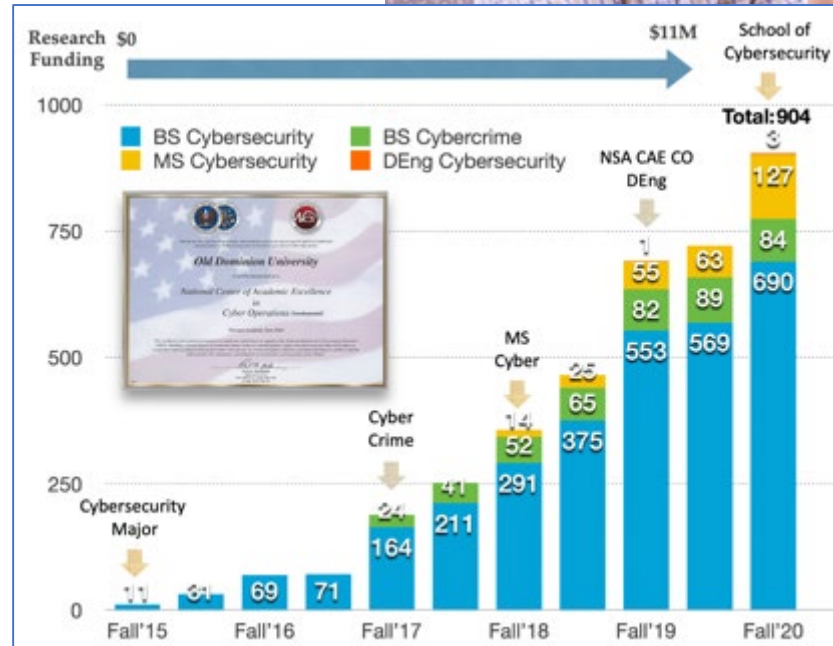
**ISABELLA
DINONNO**

ARMY ROTC & NURSING



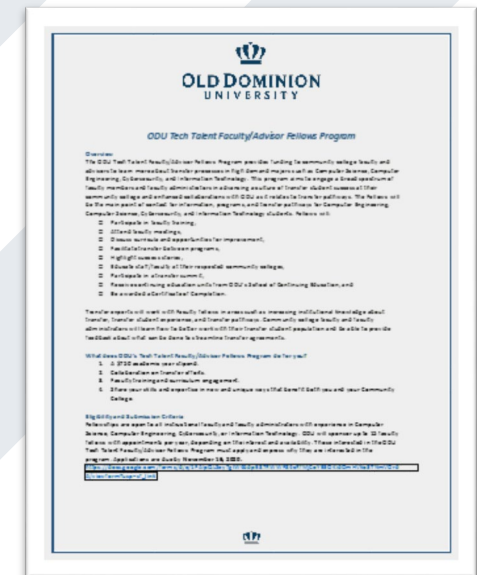
Creating New Tech Talent Pipeline and On Ramps

- Launched new School of Cybersecurity:
 - Led by internationally recognized scholar Hongyi “Michael” Wu
 - Only School of Cybersecurity in U.S. to offer undergraduate and graduate degrees
- \$20+ million in funding since 2016
 - \$5.6 million in federal and industry funding since July 2020
- A Cyber Articulation Agreement allows IT students from partner community colleges to transfer seamlessly to ODU’s cybersecurity major
- Significant enrollment growth — from 11 to 904 students



Creating New Tech Talent Pipeline and On Ramps

- Creating a Cyber Innovation Park that includes:
 - School of Cybersecurity
 - Coastal Virginia Center for Cyber Innovation
 - New game studies program
- Tech Talent Community College Faculty and Advisor Fellows Program
 - 17 advisors from ODU and 7 community colleges
 - Sponsored in part by NSF grant
 - Increased communication; improved pre-transfer experience; faculty collaboration on course learning outcomes
- School of Cybersecurity
 - Coastal Virginia Center for Cyber Innovation
 - New game studies program



Creating New Tech Talent Pipeline and On Ramps

Coastal Virginia Center for Cyber Innovation (CCI)

- Vision: Secure the nation's critical infrastructure and strengthen Virginia's economy through the commercialization of findings from cutting -edge cybersecurity research focused on the maritime, defense, and transportation industries
- A part of CCI, COVA CCI is southeastern Virginia's engine for research, innovation, and commercialization of next -generation cybersecurity technologies particularly in the areas of Cyber Physical Systems Security (CPSS), 5G, and Artificial Intelligence (AI)
 - Maritime
 - Defense
 - Transportation



COVA CCI Partners



COVA CCI Partners



Resilience During Pandemic

- ODU is Virginia's pioneer in distance learning:
 - Expertise predates the Internet, starting in the mid -1980s with courses offered on U.S. Navy ships deployed around the globe
 - Invested in distance learning and adopted technology -enabled learning decades ago; different pedagogically from face -to-face teaching in a classroom
- ODU has one of the largest distance learning programs in the U.S. due to the number of programs offered. Prior to the pandemic, ODU offered more than 110 program areas via distance technology.
- ODU has a dedicated team of instructional design teams, multimedia experts, designers, graphic artists, videographers, engineers and other technologists and educators who work with our faculty to build quality online education.



Resilience During Pandemic

- Instructional designers work with faculty to create quality online activities. They also assist and train faculty who are not familiar with online education.
- ODU students are assisted by success coaches and advisors who understand the world of remote learning.
- Students and faculty are provided with needed hardware and software to continue coursework remotely.
- Students from other universities were able to maintain their academic progress by enrolling at ODU last summer to take courses not offered online by their institutions.



What's Next for Distance Learning?

- Improve responsiveness to student demand regarding the need for accelerated courses and time to degree. A focus on 8 -week semesters is critical to the needs of the Virginia workforce.
- Advance our activity in development of fully online professional master's degree programs.
- Align programs and resources for growth according to workforce needs and incentivize targeted growth.
- Through our leadership activity with the Online Virginia Network, collaborate with other VA colleges and universities to promote more online course sharing and less duplication in course development efforts.



What's Next for Distance Learning?

- Invest in ways to share institutional employment data with students that confirms the value of a degree and ensures they have access to experiential learning to develop skills both on campus and online
- Partner to develop large scale B2B relationships with organizations and businesses such as Re -up, Guild, Dollar Tree and others to support their employee needs for online enrollment and degree completion at ODU. Also maximize internship options with those businesses, government, and community relationships.
- Continue our efforts as a pioneer in distance and online education to improve all aspects of online learning and student outcomes, across all modalities from online to face -to-face education using the technology tools that we have become proficient in developing





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