COMMONWEALTH of VIRGINIA

Office of the Governor

Aubrey L. Layne, Jr.
Secretary of Finance

December 1, 2020

The Honorable Janet D. Howell
Chair
Senate Finance & Appropriations Committee
Senate of Virginia
Post Office Box 396
Richmond, Virginia 23218

The Honorable Luke E. Torian
Chair
House Appropriations Committee
Virginia House of Delegates
900 E. Main St. Room W1304
Richmond, Virginia 23219

Dear Senator Howell and Delegate Torian:

In accordance with the Memorandum of Understanding for each participating institution of higher education, I am submitting to you the annual reports for the Tech Talent Initiative Program. As you are aware, the Tech Talent Initiative Program was established as part of an agreement with Amazon whereby the Commonwealth committed to funding public institutions of higher education through a signed memorandum of understanding to produce additional degrees in computer science and closely related fields.

The attached annual reports reflect the results of degrees produced by each institution. As you can see the majority of the institutions exceeded their targets during this past year despite the impact of COVID-19. The designated reviewers, consisting of the Secretary of Finance, Secretary of Education, DPB Director, SCHEV Director, Staff Director of House Appropriations, Staff Director of Senate Finance and Appropriations, and the CEO/President of VEDP, reviewed the annual progress report submitted by each institution and recommended approval of the grant distribution for this upcoming year as outlined in the grant award schedule within the original memorandum of understanding.

Please feel free contact me directly if you have any questions.

Sincerely,

Aubrey L. Layne, Jr.

Cc: The Honorable Atif Qarni, Secretary of Education
    April Kees, Director, Senate Finance and Appropriations Committee
    Anne Oman, Director, House Appropriations Committee
    Fran Bradford, Deputy Secretary of Education

Tech Talent Investment Pipeline Annual Fiscal Year Report Undergraduate
Fiscal Year: 2019-2020
Submission Due Date: September 15, 2020

Name of Institution: The Rector and Visitors of George Mason University

Date of Submission: September 8, 2020

Name of Individual(s) who prepared report: Aurali Dade, Ph.D.

Contact Information of Individual(s) who prepared report: Email: adade3@gmu.edu; Phone: (703) 993-5381

# of Degrees Granted in 2019-2020 Fiscal Year in TTIP-Eligible Degree Fields:

Eligible Degree Field	# of In-State Graduates in 2019-2020 Fiscal Year	# of Out-of-State Graduates in 2019-2020 Fiscal Year[1]	TOTAL (*sum of prior two columns*)
Computer Science 11.0101	259	26	285
Computer Engineering 14.0901	31	2	33
Applied Computer Science 11.0701	17	2	19
TOTAL	307	30	337

[1] For out-of-state graduate student count, reminder that online should *NOT* be included in this calculation.

Percentage of those Degrees conferred upon students who transferred to the Qualified Institution: 46%

If there has been a change in the Plan that will significantly impact the expected average annual cost incurred in the production of Eligible Degrees, please describe that impact here:

_N/A_____

_____

Total number of Bachelor's degrees conferred in 2019-2020 Fiscal Year across entire institution: 5, 890

Please submit your completed form no later than September 15, 2020. Thank you.

Tech Talent Investment Pipeline Annual Fiscal Year Report Masters
Fiscal Year: 2019-2020
Submission Due Date: September 15, 2020

Name of Institution: The Rector and Visitors of George Mason University

Date of Submission: September 8, 2020

Name of Individual(s) who prepared report: Aurali Dade, Ph.D.

Contact Information of Individual(s) who prepared report: Email: adade3@gmu.edu; Phone: (703) 993-5381

# of Degrees Granted in 2019-2020 Fiscal Year in TTIP-Eligible Degree Fields:

Eligible Degree Field	# of In-State Graduates in 2019-2020 Fiscal Year	# of Out-of-State Graduates in 2019-2020 Fiscal Year[1]	TOTAL (*sum of prior two columns*)
Computer Science 11.0101	22	36	58
Computer Engineering 14.0901	6	9	15
Computer Software Engineering 14.0903	23	12	35
TOTAL	51	57	108

[1] For out-of-state graduate student count, reminder that online should *NOT* be included in this calculation.

Percentage of those Degrees conferred upon students who transferred to the Qualified Institution: _N/A___%

If there has been a change in the Plan that will significantly impact the expected average annual cost incurred in the production of Eligible Degrees, please describe that impact here:

_N/A_____

_____

Total number of Master's degrees conferred in 2019-2020 Fiscal Year across entire institution: 3,195

Please submit your completed form no later than September 15, 2020. Thank you.

Appendix 2: Philanthropic Match Disclosure Form (Master's Only)

Name of Institution: The Rector and Visitors of George Mason University

Date of Submission: September 8, 2020

Name of Individual(s) who prepared report: Susan VanLeunen

Contact Information of Individual(s) who prepared report: Email: adade3@gmu.edu; Phone: (703) 993-5381

Sources of Philanthropic Match

Source of Match	Type of Match	Amount ($) of Match	Supporting Document(s) Provided
GMU Foundation/Van Metre Companies	TTIP Specific Philanthropic Contribution	$10,500,000	GMUF Board of Trustees Resolution (attached)

Tech Talent Investment Pipeline Annual Fiscal Year Report

Fiscal Year: 2019-2020

Submission Due Date: September 15, 2020

Name of Institution: The Visitors of Norfolk State University

Date of Submission: September 15, 2020

Name of Individual(s) who prepare report: Drs. Thorna Humphries, Rasha Morsi, Felicia Doswell, Claude Turner

Contact Information of Individual(s) who prepare the report: thumphries@nsu.edu, rmorsi@nsu.edu, fdoswell@nsu.edu, cturner@nsu.edu

# of Degrees Granted in 2019-2020 Fiscal Year in TTIP Eligible Degree Fields

Eligible Degree Field	# of In-State Graduates in 2019-2020 Fiscal Year	# of Out-of-State Graduates in 2019-2020 Fiscal Year	TOTAL (sum of prior two columns)
1. Computer Science	11	4	15
2. Computer Engineering			0
3. Computer Software Engineering			0

[1]For out-of-state graduate degree student count, reminder that online students should *NOT* be included in this calculation.

Percentage of those Degrees conferred upon students who transferred to the Qualified Institution: _____33_____%

If there has been a change in the Plan that will significantly impact the expected average annual expected cost incurred in the production of Eligible Degrees, please describe that impact here:

_____

_____

Total number of Bachelor's degrees conferred in 2019-2020 Fiscal Year across entire institution: _____710_____

Please submit your completed form no later than September 15, 2020. Thank you.

Tech Talent Investment Pipeline Annual Fiscal Year Report
Fiscal Year: 2019-2020
Submission Due Date: September 15, 2020

Name of Institution: The Visitors of Radford University

Date of Submission: September 14, 2020

Name of Individual(s) who prepared report: Chad A. Reed

Contact Information of Individual(s) who prepared report: (540) 831-5411

or creed4@radford.edu

# of Degrees Granted in 2019-2020 Fiscal Year in TTIP-Eligible Degree Fields:

Eligible Degree Field	# of In-State Graduates in 2019-2020 Fiscal Year	# of Out-of-State Graduates in 2019-2020 Fiscal Year	TOTAL (sum of prior two columns)
1. Computer Science	44	2	46
2. Computer Engineering			0
3. Computer Software Engineering			0

[1] For out-of-state graduate degree student count, reminder that online students should **NOT** be included in this calculation.

Percentage of those Degrees conferred upon students who transferred to the Qualified Institution: 54 %

If there has been a change in the Plan that will significantly impact the expected average annual cost incurred in the production of Eligible Degrees, please describe that impact here: N/A

Total number of Bachelor's degrees conferred in 2019-2020 Fiscal Year across entire institution: 1,879

Please submit your completed form no later than September 15, 2020. Thank you.

Tech Talent Investment Pipeline Annual Fiscal Year Report Undergraduate
Fiscal Year: 2019-2020
Submission Due Date: September 15, 2020

Name of Institution: University of Mary Washington

Date of Submission: September 15, 2020

Name of Individual(s) who prepared report: Keith E. Mellinger, Dean of Arts and Sciences & John T. Morello, Associate Provost for Academic Affairs

Contact Information of Individual(s) who prepared report: kmelling@umw.edu, jmorello@umw.edu

\# of Degrees Granted in 2019-2020 Fiscal Year in TTIP-Eligible Degree Fields:

Eligible Degree Field	# of In-State Graduates in 2019-2020 Fiscal Year	# of Out-of-State Graduates in 2019-2020 Fiscal Year[1]	TOTAL (*sum of prior two columns*)
Computer Science	62	4	66
TOTAL	62	4	66

[1] For out-of-state graduate student count, reminder that online should *NOT* be included in this calculation.

Percentage of those Degrees conferred upon students who transferred to the Qualified Institution: 46.97%

If there has been a change in the Plan that will significantly impact the expected average annual cost incurred in the production of Eligible Degrees, please describe that impact here:

__We have not made any changes to our plan._____

_____

Total number of Bachelor's degrees conferred in 2019-2020 Fiscal Year across entire institution: 1024

Please submit your completed form no later than September 15, 2020. Thank you.

APPENDIX 1: Tech Talent Investment Pipeline Annual Fiscal Year Report

Tech Talent Investment Pipeline Annual Fiscal Year Report
Fiscal Year: 2020-2021
Submission Due Date: September 15, 2020

Name of institution: *The State Board for Community Colleges*

Date of Submission: *September 15, 2020*

Name of Individual(s) who prepared report: *Craig Herndon*

Contact Information of Individual(s) who prepared report: cherndon@vccs.edu

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1. **Computer Information Systems – *367****

2. **Computer Science – *283***

3. **Computer Engineering – *16****

4. **Computer Software Engineering – *0****

Total number of Eligible Associate Degrees conferred in 2018-2019 Fiscal Year across VCCS (Baseline): *325*

If there has been a change in the Plan that will significantly impact the expected average annual cost incurred in the production of New Eligible Associate Degrees, please describe that impact here:

*Based on guidance provided by Secretary Bradford on September 14, 2020, VCCS is reporting on the numbers of community college graduates receiving associate degrees in the identified programs, which differs from our baseline number (325), because that baseline reflected graduates who transferred to a senior institution in the approved CIP programs. VCCS does not currently have transfer information for 2019-2020 graduates in these programs. VCCS will provide an updated report when those data are available from SCHEV. Additionally, those graduates reflected here in Computer Information Systems are associate of applied science degrees, which are eligible for transfer, but often lead directly into the workplace. The 16 degrees reflected in Computer Engineering represent degrees awarded in 14.0101 (Engineering) with computer engineering specializations. VCCS had 459 total degrees awarded in Engineering, many of which are likely to transfer to one of the four approved programs at a senior institution.

Tech Talent Investment Pipeline Annual Fiscal Year Report
Fiscal Year: 2019-2020
Submission Due Date: September 15, 2020

Name of Institution: _____Christopher Newport University_____

Date of Submission: _____September 15, 2020_____

Name of Individual(s) who prepared report: ____Jennifer Latour_____

Contact Information of Individual(s) who prepared report: ___jennifer.latour@cnu.edu____

__757-594-8589_____

# of Degrees Granted in 2019-2020 Fiscal Year in TTIP-Eligible Degree Fields:

Eligible Degree Field	# of In-State Graduates in 2019-2020 Fiscal Year	# of Out-of-State Graduates in 2019-2020 Fiscal Year[1]	TOTAL *(sum of prior two columns)*
1. **Computer Science**	55	2	57
2. **Computer Engineering**	16	0	16
3. **Computer Software Engineering**	N/A	N/A	N/A

[1]For out-of-state graduate degree student count, reminder that online students should ***NOT*** be included in this calculation.

Percentage of those Degrees conferred upon students who transferred to the Qualified Institution: __9.6_%

If there has been a change in the Plan that will significantly impact the expected average annual cost incurred in the production of Eligible Degrees, please describe that impact here: _____

_____N/A_____

_____

Total number of Bachelor's degrees conferred in 2019-2020 Fiscal Year across entire institution: __1105__

Please submit your completed form no later than September 15, 2020. Thank you.

Tech Talent Investment Pipeline Annual Fiscal Year Report Undergraduate
Fiscal Year: 2019-2020
Submission Due Date: September 15, 2020

Name of Institution: University of Virginia (Agency 207)

Date of Submission: 14 September 2020

Name of Individual(s) who prepared report:. Christina Morell

Contact Information of Individual(s) who prepared report: cm5c@virginia.edu (434) 924-8958

# of Degrees Granted in 2019-2020 Fiscal Year in TTIP-Eligible Degree Fields:

Eligible Degree Field	# of In-State Graduates in 2019-2020 Fiscal Year	# of Out-of-State Graduates in 2019-2020 Fiscal Year[1]	TOTAL (*sum of prior two columns*)
BS Computer Science	144	43	187
BS Computer Engineering	49	9	58
TOTAL	193	52	245

[1] For out-of-state graduate student count, reminder that online should *NOT* be included in this calculation.

Percentage of those Degrees conferred upon students who transferred to the Qualified Institution: 8.6% (21/244)

If there has been a change in the Plan that will significantly impact the expected average annual cost incurred in the production of Eligible Degrees, please describe that impact here:

 *Note: One student double majored in Computer Science and Computer Engineering.
 The distinct total of BS Computer Science and BS Computer Engineering graduates is 244.

_____

Total number of Bachelor's degrees conferred in 2019-2020 Fiscal Year across entire institution: 4,171
  o Percentage represented by BS Computer Science and BS Computer Engineering: 5.8% (244/4,171)

Please submit your completed form no later than September 15, 2020. Thank you.

To: Secretary Layne, Secretary of Finance
CC: Secretary Qarni, Secretary of Education
CC: Fran Bradford, Deputy Secretary of Education

Subject: Tech Talent Investment Pipeline Annual Fiscal Year Report

Date of Submission: September 15, 2020

Name of Institution: The Rector and Visitors of the University of Virginia

Prepared by: Pam Norris, Executive Dean, School of Engineering and Applied Science
                contact information: pmn3d@virginia.edu, 434-466-1499
and   Kevin Skadron, Chair, Department of Computer Science
                contact information: skadron@virginia.edu, 434-982-2042

This memo provides our annual update on activities at the University of Virginia supporting the Tech Talent Investment Program.

To apply for a grant each year, a qualified institution shall report to the Secretary of Finance regarding the qualified institution's progress on increasing the number of eligible degrees and meeting the requirements pursuant to its memorandum of understanding. Such report shall include, at a minimum:

(i) progress on increasing the number of eligible degrees, as set forth in the memorandum of understanding, including actual enrollment in qualified degree programs;

Fall Enrollment in Qualified Degree Programs (bachelor's degree in Computer Science and Computer Engineering):

Computer and information sciences, general (11.0101)				*Computer engineering (14.0901)*			*Combined*
Year	**Total**	**In-State**	**Out-of-State**	**Total**	**In-State**	**Out-of-State**	**Grand Total**
2018-19	584	477	107	169	125	44	753
2019-20	647	531	116	180	145	35	827
2020-21	749	622	127	168	127	41	917

The students in UVA Engineering declare their major at the end of their first year, and the major declaration data for this year, along with recent historical data, is provided below. There is clearly a significant increase in Computer Science degrees expressed by our first-year students. In 2017, 37% of all first-year students declared either CS or CpE and this year that percentage has increased to over 45%.

Major Declaration	**Spring 2020**	**Spring 2019**	**Spring 2018**	**Spring 2017**
Computer Engineering	47	56	48	52
Computer Science	269	196	200	175

The CS department is developing a proposal to convert an existing interdisciplinary degree in the College of Arts and Sciences to a BA in Computer Science. We anticipate approval at UVA to be complete in time to allow us to submit this to SCHEV in March 2021, with a goal of receiving full approval to be effective in Spring 2022. The existing interdisciplinary program awarded degrees to 205 BA students in 2018-2019 and 250 degrees in 2019-20.

(ii) the aggregate number of new eligible degrees created and maintained as of the last day of the calendar year that immediately precedes the date of the application, including information related to the retention of students who enrolled in the calendar year immediately preceding the application; and

Degrees Awarded (bachelor's degree in Computer Science or Computer Engineering):

Degrees awarded - Calendar years 2018, 2019, and 2020 YTD												
	Calendar Year 2018				Calendar Year 2019				Calendar Year 2020 YTD			
	Spring	Summer	Fall	**Total**	Spring	Summer	Fall	**Total**	Spring	Summer	Fall	**Total YTD**
Computer Science	128	4	11	**143**	156	2	15	**173**	167	10	TBD	**177**
Computer Engineering	34	3	1	**38**	36	0	4	**40**	53	4	TBD	**57**
Totals	162	7	12	**181**	192	2	19	**213**	220	14	TBD	**234**

Number of degrees awarded to transfer students in 2019-20: 14 for Computer Science, 6 for Computer Engineering

Total bachelor's degrees awarded across entire institution in 2019-20: 4171

Please note, as reported in our interim report, there is a discrepancy in this data provided by the University and on the state SCHEV site which shows our total baseline eligible degree production in AY2018-19 was 219, while the UVA MOU states "Baseline Eligible Degree Production (based on AY 2018-19 submission): 239". The entire chart showing addition degree production numbers is thus inflated by 20 degrees above our actual baseline. We hope this discrepancy can be corrected moving forward. Data from the SCHEV site is copied below.

Degrees Awarded (bachelor's degree in Computer Science and Computer Engineering) per Academic Year:

Computer and information sciences, general (11.0101)				*Computer engineering (14.0901)*			*Combined*
Year	**Total**	**In-State**	**Out-of-State**	**Total**	**In-State**	**Out-of-State**	**Grand Total**
2014-15	124	108	16	50	43	7	174
2015-16	106	89	17	40	32	8	146
2016-17	139	109	30	57	42	15	196
2017-18	139	113	26	45	39	6	184
2018-19	174	140	34	45	33	12	219
2019-20*	184	142	42	58	49	9	242

*2019-2020 degrees awarded is a preliminary count

Retention has not been a major concern (we have an 84% average four-year graduation rate at UVA Engineering, compared to a national average of 33% in Engineering).

(iii) the average annual cost incurred in the production of the new eligible degrees described in clause (ii).

To support growth in the eligible degree programs, we have made many investments, most notably many new hires of both tenured/tenure track faculty and teaching-track academic general faculty. These hires have been into both the computer science department (CS) and the electrical and computer engineering (ECE) department, since the computer engineering degree program is jointly administered by both departments.

In 2019-20, we had 7 new tenured/tenure track faculty and 1 new academic general faculty with full or partial appointments in CS and ECE join us, and in 2020-21, we have 1 new tenured faculty and 1 new academic general faculty joining CS and they will be teaching our expanded student base. The total committed funds for these new hires was just approx. $4.5M, and the annual payroll for them is approx. $1.4M.

We continued to search for additional CS faculty in 2019-20. We had 335 applications for tenured/tenure track positions, and we interviewed 11 candidates and extended 5 offers, but unfortunately all were declined. Likewise, we had 73 applications for academic general faculty positions, and we interviewed 4 and have extended 2 offers, with one person accepting and joining this fall. Start-ups packages for these 7 offers totalled just shy of $4M. We are disappointed by the poor yield on our offers; unfortunately, hiring CS faculty has been extraordinarily competitive. The candidates we lost accepted offers at institutions such as Carnegie Mellon, University of Illinois, University of Washington, University of California at Santa Barbara, University of Wisconsin, and Boston University.

To accommodate growth, we have commissioned architectural planning to expand capacity for faculty and students involved in computing degrees. We are just wrapping up a site-selection study, which cost $400K.

Finally, we have made significant investments in our computing capabilities within the cluster maintained by Computer Science. This year we invested $96,000 in increasing the capacity of GPU servers.

If there has been a change in the Plan that will significantly impact the expected average annual cost incurred in the production of Eligible Degrees, please describe that impact here:

We are still working on a methodology to calculate an "average annual cost incurred in the production of the new eligible degrees." Because instructional costs vary from one department to another, an accurate accounting requires considerable effort. However, there has been no change that would significantly impact the expected annual average cost. In the meantime, these are the investments we have made that will enable us to produce the expanded degree production promised.

VIRGINIA STATE UNIVERSITY
PETERSBURG, VIRGINIA 23806

OFFICE OF THE PROVOST/VICE PRESIDENT
FOR ACADEMIC AFFAIRS
(804) 524-5997

FAX (804) 524-5738
TDD (804) 524-5487

September 14, 2020

Secretary Aubrey L. Layne, Jr.
Secretary of Finance
Patrick Henry Building
111 East Broad Street
Richmond, VA 23219

Dear Secretary Layne,

Re: Virginia State University TTIP Annual Fiscal Report Undergraduate (FY: 2019-2020)

Please find the attached Virginia State University Tech Talent Investment Pipeline Annual Fiscal Report Undergraduate for Fiscal Year 2019-2020.

Respectfully,

Donald E. Palm Digitally signed by Donald E. Palm
DN: cn=Donald E. Palm, o=Virginia State University,
ou=Academic Affairs, email=dpalm@vsu.edu, c=US
Date: 2020.09.14 20:09:13 -04'00'

Donald Palm, Ph.D.
Provost & Senior Vice President
Academic and Student Affairs

cc: Atif Qarni
        Secretary of Education

        Fran Bradford
        Deputy Secretary of Education

Tech Talent Investment Pipeline Annual Fiscal Year Report Undergraduate
Fiscal Year: 2019-2020
Submission Due Date: September 15, 2020

Name of Institution: Virginia State University

Date of Submission: 9/14/2020

Name of Individual(s) who prepared report: Tanya Harris

Contact Information of Individual(s) who prepared report: 804-524-5068 / taharris@vsu.edu

# of Degrees Granted in 2019-2020 Fiscal Year in TTIP-Eligible Degree Fields:

Eligible Degree Field	# of In-State Graduates in 2019-2020 Fiscal Year	# of Out-of-State Graduates in 2019-2020 Fiscal Year[1]	TOTAL (*sum of prior two columns*)
Computer Engineering, B.S.	7	6	13
Computer Science, B.S.	13	5	18
TOTAL	20	11	31

[1] For out-of-state graduate student count, reminder that online should *NOT* be included in this calculation.

Percentage of those Degrees conferred upon students who transferred to the Qualified Institution: 19.4%

If there has been a change in the Plan that will significantly impact the expected average annual cost incurred in the production of Eligible Degrees, please describe that impact here:

Due to the current remote instructions in place, there might be a slight increase on the annual cost of production but that won't significantly impact the proposed average annual cost incurred in the production of eligible degrees.

Total number of Bachelor's degrees conferred in 2019-2020 Fiscal Year across entire institution: 770

Tech Talent Investment Pipeline Annual Fiscal Year Report
Fiscal Year: 2020-2021
Submission Due Date: September 15, 2020

Name of Institution: The Visitors of Longwood University

Date of Submission: ____September 14, 2020_____

Name of Individual(s) who prepared report: _Dr. Larissa M. Smith_____

Contact Information of Individual(s) who prepared report: **_smithlm@longwood.edu_____**

_____

# of Degrees Granted in 2019-2020 Fiscal Year in TTIP-Eligible Degree Fields:

Eligible Degree Field	# of In-State Graduates in 2019-2020 Fiscal Year	# of Out-of-State Graduates in 2019-2020 Fiscal Year[1]	TOTAL *(sum of prior two columns)*
1. **Computer Science**	17	3	20
2. **Computer Engineering**	0	0	0
3. **Computer Software Engineering**	0	0	0

[1]For out-of-state graduate degree student count, reminder that online students should **NOT** be included in this calculation.

Percentage of those Degrees conferred upon students who transferred to the Qualified Institution: _45_%

If there has been a change in the Plan that will significantly impact the expected average annual cost incurred in the production of Eligible Degrees, please describe that impact here: _____

_____

_____

Total number of Bachelor's degrees conferred in 2019-2020 Fiscal Year across entire institution: _827_

Please submit your completed form no later than September 15, 2020. Thank you.

APPENDIX 1: Tech Talent Investment Pipeline Annual Fiscal Year Report

Tech Talent Investment Pipeline Annual Fiscal Year Report
Fiscal Year: 2019 -2020
Submission Due Date: September 15, 2020

Name of Institution: __Old Dominion University__

Date of Submission: __September 14, 2020__

Name of Individual(s) who prepared report: _Brian Payne, Associate Provost and Bruce Aird, University Budget Officer_

Contact Information of Individual(s) who prepared report:
- Brian Payne, Assoc. Provost: bpayne@odu.edu or 757.683.4757
- Bruce Aird, Univ. Budget Officer, baird@odu.edu or 757.683.3089

# of Degrees Granted in 2019 – 2020 Fiscal Year in TTIP-Eligible Degree Fields:

Eligible Degree Field	# of In-State Graduates in 20__-20__ Fiscal Year	# of Out-of-State Graduates in 20__-20__ Fiscal Year[1]	TOTAL *(sum of prior two columns)*
1. **Computer Science**	87	1	88
2. **Computer Engineering**	27	2	29
3. **Computer Software Engineering**			

[1]For out-of-state graduate degree student count, reminder that online students should ***NOT*** be included in this calculation.

Notes:
- ODU granted 6 degrees for online, out-of-state students not included in the above totals for 2019-2020.
- Degree data contained in this report is preliminary. Official degree completion data will be submitted to SCHEV on September 25, 2020. If any changes are identified in the final degree reporting, ODU will submit an updated TTIPL Annual Report at that time.

Percentage of those Degrees conferred upon students who transferred to the Qualified Institution: 59.83%

If there has been a change in the Plan that will significantly impact the expected average annual cost incurred in the production of Eligible Degrees, please describe that impact here: ____N/A____

Total number Bachelor's degrees conferred in 2019-2020 Fiscal Year across entire institution: 3,832

Please submit your completed form no later than September 15, 2020. Thank you.

September 15, 2020

Governor Ralph Northam
Commonwealth of Virginia
1111 East Broad Street, 4th Floor
P.O. Box 2475
Richmond, VA 23218

Dear Governor Northam,

I am writing to submit the University of Virginia's College at Wise Tech Talent Investment Program report for fiscal year 2019-2020.

Increasing Southwest Virginia's technology workforce remains a priority of UVA Wise and we are pleased to be participating in this Commonwealth initiative to be the top state for technology companies and professionals.

On behalf of the University of Virginia's College at Wise, please consider us a continued partner in this endeavor. Should you have any questions, please feel free to contact me at 276-328-0144.

Best regards,

Scott Bevins, Ph.D.
Associate Provost for Information Services & CIO
Interim Department Chair, Business & Economics
The University of Virginia's College at Wise | One College Avenue, Wise, Virginia, 24293

CC: Aubrey Layne, Secretary of Finance
Atif Qarni, Secretary of Education
Stephen Moret, Ph.D. President & CEO, Virginia Economic Development Partnership
Donna Henry, Ph.D. Chancellor, University of Virginia's College at Wise

Associate Provost for Information Services & CIO

P 276.328.0144 | **F** 276.376.1045 | **E** scott.bevins@uvawise.edu
1 College Avenue | Wise, VA 24293 | **www.uvawise.edu**

APPENDIX 1: Tech Talent Investment Plan Annual Fiscal Year Report

Tech Talent Investment Pipeline Annual Fiscal Year Report

Fiscal Year: 2019-2020
Submission Due Date: September 15, 2020

Name of Institution: **The University of Virginia's College at Wise**

Date of Submission: **September 14, 2020**

Name of Individual(s) who prepared the report: **Scott Bevins, Shannon Blevins**

Contact Information of Individuals(s) who prepared report: **Scott.bevins@uvawise.edu / 276-328-0144, Sblevins@uvawise.edu / 276-328-0162**

# of Degrees Granted in 2019 – 2020 Fiscal Year in TTIP – Eligible Degree Fields:

Eligible Degree Field	# of In-State Graduates in 2019-2020	# of Out-of-State Graduates in 2019-2020[1]	Total
1. Computer Science	11	0	11
2. Software Engineering	6	1	7

[1]For out-of-state graduate degree students count, reminder than online students should NOT be included in this calculation.

Percentage of those Degrees conferred upon students who transferred to the Qualified Institution: **33% (COSC, SWEG)**

If there has been a change in the Plan that will significantly impact the expected average annual cost incurred in the production of Eligible Degrees, please describe that impact here:

Currently, there are no significant changes to the Plan UVA Wise has developed to increase the production of Eligible Degrees. However, given the fact that we are operating in the midst of a pandemic, we are still assessing the impact of COVID-19 and how it affects the Tech Talent Investment Pipeline initiative.

Total number of Bachelor's degrees conferred in 2019-2020 Fiscal Year across entire institution: **234**

Tech Talent Investment Pipeline Annual Fiscal Year Report
Fiscal year: 2019-2020

Name of Institution: Virginia Commonwealth University

Date of Submission: September 11, 2020

Name of Individual who prepared report: John Leonard
Contact information: jdleonard@vcu.edu

# of Degrees Granted in 2019-2020 Fiscal Year in TTIP-Eligible Fields:

Eligible Degree Field	# of In-state graduates 2019-2020	# of Out-of-State graduates 2019-2020	Totals
Computer science	73	3	76
Computer engineering	31	5	36
Software Engineering	0	0	0
Totals	104	8	112

Percentage of degrees conferred upon students who TRANSFERRED to the Qualified Institution: 35%

If there has been a change in the Plan that will significantly impact the expected average annual cost incurred in the production of Eligible Degrees, please describe that impact here:

    -no change-

Total number of Bachelor's Degrees conferred in 2019-2020 Fiscal year across entire institution:

    4,945

Please submit your completed form no later than September 15, 2020. Thank you.

APPENDIX 1: Tech Talent Investment Pipeline Annual Academic Year Report

Tech Talent Investment Pipeline Annual Academic Year Report
Academic Year: 2019-2020
Submission Due Date: September 15, 2020

Name of Institution: ___William & Mary_____

Date of Submission: ____9/10/20_____

Name of Individual(s) who prepared report: Jacob Long_____

Contact Information of Individual(s) who prepared report: jplong01@wm.edu, 757-221-2516__

\# of Degrees Granted in 2019-2020 Academic Year in TTIP-Eligible Degree Fields:

Eligible Degree Field	# of In-State Graduates in 2019-2020 Academic Year	# of Out-of-State Graduates in 2019-2020 Academic Year[1]	TOTAL *(sum of prior two columns)*
1. **Computer Science**	57	16	73
2. **Computer Engineering**			
3. **Computer Software Engineering**			

[1]For out-of-state graduate degree student count, reminder that online students should ***NOT*** be included in this calculation.

Percentage of those Degrees conferred upon students who transferred to the Qualified Institution: ____12.3____%

If there has been a change in the Plan that will significantly impact the expected average annual cost incurred in the production of Eligible Degrees, please describe that impact here: _____

Total number of Bachelor's degrees conferred in 2019-2020 academic year across entire institution: 1604

Please submit your completed form no later than September 15, 2020. Thank you.

VIRGINIA TECH.

September 15, 2020

The Honorable Aubrey L. Layne, Jr.
Office of the Secretary of Finance
P.O. Box 1475
Richmond, VA 23218

Dear Secretary Layne:

Pursuant to Chapter 639 of the 2019 Acts of Assembly, enclosed please find the university's Annual Fiscal Year Reports for the Tech Talent Investment Pipeline for undergraduate and graduate degrees and the Philanthropic Match Disclosure Form.

As part of this initial submission, I would like to provide some additional context on Virginia Tech's progress in fulfilling our degree commitments as outlined in the November 19, 2019 Memorandum of Understanding. For Fiscal Year 2019-20, the university exceeded undergraduate degree growth targets in both Computer Science and Computer Engineering. The university continues to experience robust undergraduate enrollment, particularly in Engineering, and met its enrollment targets for Fall 2020 despite the unprecedented challenges posed by the COVID-19 pandemic. Over the next several years, robust undergraduate enrollment growth will translate to increased degree attainment in TTIP eligible degree fields.

While the impact of the COVID-19 on undergraduate enrollment has so far been limited, the pandemic has had a disproportionate impact on out-of-state graduate enrollment in TTIP eligible programs, particularly international enrollment. As the COVID-19 pandemic recedes, the university anticipates a rebound in this population. The university is also proactively implementing multiple strategies to increase the enrollment of in-state graduates, including:

- A new scholarship program designed to encourage current Virginia Tech undergraduates in all degree programs to enroll in TTIP prerequisite courses so they are qualified for admission to the Master in Engineering in Computer Science. Many of these courses are now available in an online format which allows for expanded summer enrollment;

- A new accelerated Computer Science 4+1 Computer Science degree program that enrolled its inaugural class in Fall 2020;

- Partnerships with Virginia institutions, including Christopher Newport, James Madison, Radford, and Hollins, on articulation agreements so their undergraduates can attend Virginia Tech graduate programs in computer science;

- Collaboration with corporate partners in Virginia like Northup Grumman to enroll their employees in TTIP advanced degree programs.

Combined with the enhanced visibility of Tech Talent programs and the value associated with degrees in these fields, the implementation of these strategies will drive demand and a corresponding acceleration of growth in net graduate degrees.

On the philanthropic match requirement, I am pleased to report $46.4 million in pledges and gifts towards this initiative. This includes a $39 million contribution of real property to advance the university's Innovation Campus project in Alexandria. We respectfully request approval to include this critical contribution, as required by the MOU.

Virginia Tech looks forward to its ongoing partnership with the commonwealth to attract world-class talent and position Virginia as a global leader for innovation. If you have any questions about these reports, please do not hesitate to contact me.

Sincerely,

Dwayne L. Pinkney
Senior Vice President and Chief Business Officer

Attachments

CC:

Fran Bradford
Cyril Clarke
Elizabeth Hooper
Kenneth Miller
Timothy Sands

Bachelor's Degree Production

APPENDIX 1: Tech Talent Investment Pipeline Annual Fiscal Year Report

Tech Talent Investment Pipeline Annual Fiscal Year Report
Fiscal Year: 2019-2020
Submission Due Date: September 15, 2020

Name of Institution: Virginia Polytechnic Institute and State University

Date of Submission: September 15, 2020

Name of Individual(s) who prepared report: ____Brennan Shepard_____

Contact Information of Individual(s) who prepared report: __**brshepar@vt.edu**_____

# of Degrees Granted in 2019-2020 Fiscal Year in TTIP-Eligible Degree Fields:

Eligible Degree Field	# of In-State Graduates in 2019-2020 Fiscal Year	# of Out-of-State Graduates in 2019-2020 Fiscal Year[1]	TOTAL (sum of prior two columns)
1. Computer Science	224	87	311
2. Computer Engineering	125	54	179
3. Computer Software Engineering			

[1]For out-of-state graduate degree student count, reminder that online students should *NOT* be included in this calculation.

Percentage of those Degrees conferred upon students who transferred to the Qualified Institution:
____11.8____ %

If there has been a change in the Plan that will significantly impact the expected average annual cost incurred in the production of Eligible Degrees, please describe that impact here: _____

Total number of Bachelor's degrees conferred in 2019-2020 Fiscal Year across entire institution:
7230

Please submit your completed form no later than September 15, 2020. Thank you.

Master's Degree Production

APPENDIX 1: Tech Talent Investment Pipeline Annual Fiscal Year Report

Tech Talent Investment Pipeline Annual Fiscal Year Report
Fiscal Year: 2019-2020
Submission Due Date: September 15, 2020

Name of Institution: Virginia Polytechnic Institute and State University

Date of Submission: _____September 15, 2020_____

Name of Individual(s) who prepared report: _____Brennan Shepard_____

Contact Information of Individual(s) who prepared report: ___**brshepar@vt.edu**_____

_____

# of Degrees Granted in 2019-2020 Fiscal Year in TTIP-Eligible Degree Fields:

Eligible Degree Field	# of In-State Graduates in 2019-2020 Fiscal Year	# of Out-of-State Graduates in 2019-2020 Fiscal Year[1]	TOTAL (sum of prior two columns)
1. Computer Science	13	36	49
2. Computer Engineering	7	42	49
3. Computer Software Engineering			

[1]For out-of-state graduate degree student count, reminder that online students should *NOT* be included in this calculation.

Percentage of those Degrees conferred upon students who transferred to the Qualified Institution: _____N/A_____ %

If there has been a change in the Plan that will significantly impact the expected average annual cost incurred in the production of Eligible Degrees, please describe that impact here: _____

_____

_____

Total number of Master's degrees conferred in 2019-2020 Fiscal Year across entire institution: 1434

Please submit your completed form no later than September 15, 2020. Thank you.

APPENDIX 2: Philanthropic Match Disclosure Form (Masters Only)

Philanthropic Match Disclosure Form (Masters Only)
Fiscal Year: 2019-2020
Submission Due Date: September 15, 2020

Name of Institution: Virginia Polytechnic Institute and State University

Date of Submission: _____ September 15, 2020 _____

Name of Individual(s) who prepared report: _____Brennan Shepard_____

Contact Information of Individual(s) who prepared report: _____**brshepar@vt.edu**_____

_____

Sources of Philanthropic Match

Source of Match	Type of Match[1]	Amount ($) of Match	Supporting Document(s) Provided
Individuals	TTIP-specific philanthropic contributions	$2,840	Advancement gift report
Corporations	TTIP-specific philanthropic contributions	$39,000,025	Advancement gift report
Individuals	TTIP-specific philanthropic pledges	$7,400,000	Advancement gift report

[1]Types can include "TTIP-specific philanthropic contribution", "TTIP-specific philanthropic pledge", or "non-state, non-tuition dollars provided by the institution"

Please submit your completed form no later than September 15, 2020 to avoid delays in the disbursement of funds for the upcoming year.

To: The Honorable Aubrey Layne, Secretary of Finance

From: Mr. Jason McClain, AVP Academic Resources, James Madison University

RE: James Madison University Tech Talent Investment Program (TTIP) Award

Date: September 15, 2020

Pursuant to the September 15 TTIP Annual Request for Grant payment requirements set forth in Virginia Code- § *23.1-1241*. *Approval and update of memorandum of understanding;* please find enclosed James Madison University's annual grant request associated with the Computer Science - Bachelor of Science degree program, as outlined in the TTIP Memorandum of Understanding (MOU).

FY 20-21 Operating Expense Support: $685,381
FY 20-21 Equipment Support: $10,000
FY 20-21 State Capital Support: $900,000
Total State Support: $1,595,381

Year over year, the number of Computer Science – Bachelor of Science graduates increased by 28 (2018-19 = 85, 2019-20 = 113). The interest in the major remains strong as the number of declared majors has increased year-over-year from 643 to 667 (an increase of 24).

Should you require additional information to complete this request please contact me at mcclaijd@jmu.edu or 540-568-7373.

We are fully engaged in pursuing the objectives of the TTIP program and pleased to report growth in our Computer Science BS program (new and graduating students). Thank you for your steadfast advocacy and support of this initiative.

CC: The Honorable Atif Qarni, Secretary of Education
        Ms. Fran Bradford, Deputy Secretary of Education
        Mr. Jonathan Alger, President James Madison University
        Dr. Heather Coltman, Provost and Senior Vice President for Academic Affairs
        Mr. Charlie King, Senior Vice President for Administration and Finance
        Dr. Robert Kolvoord, Dean of the College of Science and Engineering

APPENDIX 1: Tech Talent Investment Pipeline Annual Fiscal Year Report

Tech Talent Investment Pipeline Annual Fiscal Year Report
Fiscal Year: 2019-2020
Submission Due Date: September 15, 2020

Name of Institution: The Visitors of James Madison University

Date of Submission: September 10, 2020

Name of Individual(s) who prepared report: Jason McClain

Contact Information of Individual(s) who prepared report: mcclaijd@jmu.edu; 540-568-7373

# of Degrees Granted in 2019-2020 Fiscal Year in TTIP-Eligible Degree Fields:

Eligible Degree Field	# of In-State Graduates in 2019-2020 Fiscal Year	# of Out-of-State Graduates in 2019-2020 Fiscal Year[1]	TOTAL *(sum of prior two columns)*
1. **Computer Science**	106	7	113
2. **Computer Engineering**	n/a	n/a	n/a
3. **Computer Software Engineering**	n/a	n/a	n/a

[1]For out-of-state graduate degree student count, reminder that online students should **NOT** be included in this calculation.

Percentage of those Degrees conferred upon students who transferred to the Qualified Institution: 28.32%

If there has been a change in the Plan that will significantly impact the expected average annual cost incurred in the production of Eligible Degrees, please describe that impact here: n/a

Total number of Bachelor's degrees conferred in 2019-2020 Fiscal Year across entire institution: 4683

Please submit your completed form no later than September 15, 2020. Thank you.

VIRGINIA'S TECH TALENT INVESTMENT PROGRAM (TTIP) AWARD

James Madison University (Bachelors)

Baseline Eligible Degree Production (based on AY 2018-19 submission):   102
Est. % of New Eligible Degrees that are Reallocated Degrees (based on AY 2018-19 submission):   20%
Est. % of New Eligible Degrees Produced from In-State Graduates (based on AY 2018-19 submission):   85%

Academic Year / Fiscal Year	Total Eligible Bachelor's Degree Production Commitment	New Eligible Bachelor's Degree Production Commitment Above Baseline	Cumulative New Eligible Bachelor's Degree Production Commitment Above Baseline	Awarded Operating Expense Support (SGF $)	Awarded Equipment Support ($)	Awarded State Capital Support ($)	TOTAL AWARDED STATE SUPPORT ($)
19-20	108	6	6	387,126	-	-	387,126
20-21	116	14	20	685,381	10,000	900,000	1,595,381
21-22	124	22	42	685,381	5,000	-	690,381
22-23	127	25	67	685,381	-	-	685,381
23-24	127	25	92	685,381	-	-	685,381
24-25	127	25	117	685,381	-	-	685,381
25-26	127	25	142	685,381	-	-	685,381
26-27	127	25	167	685,381	-	-	685,381
27-28	127	25	192	685,381	-	-	685,381
28-29	127	25	217	685,381	-	-	685,381
29-30	127	25	242	685,381	-	-	685,381
30-31	127	25	267	685,381	-	-	685,381
31-32	127	25	292	685,381	-	-	685,381
32-33	127	25	317	685,381	-	-	685,381
33-34	127	25	342	685,381	-	-	685,381
34-35	127	25	367	685,381	-	-	685,381
35-36	127	25	392	685,381	-	-	685,381
36-37	127	25	417	685,381	-	-	685,381
37-38	127	25	442	685,381	-	-	685,381
38-39	127	25	467	685,381	-	-	685,381
TOTAL	2,507	467		13,409,368	15,000	900,000	14,324,368