



VIRGINIA COMMONWEALTH UNIVERSITY

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VIRGINIA COMMONWEALTH

BOARD OF VISITORS

DECEMBER 11, 2020

ELECTRONIC

AGENDA

MINUTES

BOARD MEMBERS PRESENT VIA ZOOM

Mr. Keith T. Parker, Rector

Mr. H. Benson Dendy III, Vice Rector

Ms. Pamela K. El

Ms. Carolina Espinal

Mr. Peter Farrell

Mr. Todd P. Haymore

Dr. Gopinath R. Jadhav

Ambassador Carmen Lomellin

Mr. Edward L. McCoy, Secretary (entered at 8:20 a.m.; exited at 9:10 a.m.; returned at 11:30 a.m.)

Rev. Tyrone E. Nelson (entered 8:25 a.m.; exited at 11:00 a.m.)

Dr. Tonya Parris-Wilkins

Ms. Coleen Santa Ana

Mr. Stuart C. Siegel

Ms. Alexis Swann

Dr. Shantaram Talegaonkar

Mr. G. Richard Wagoner, Jr.

OTHERS PRESENT

President Michael Rao

Ms. Chelsea Gray, Assistant Secretary and Board Liaison

Ms. Karen Helderman, Executive Director for Audit and Compliance Services

Mr. Mike Melis, University Counsel

Presidential Cabinet of VCU

VCU students, faculty and staff via <https://mssvideo.vcu.edu/BOV>

Members of the Media via <https://mssvideo.vcu.edu/BOV>

CALL TO ORDER

Mr. Keith T. Parker, Rector called the meeting to order at 8:01 a.m. Ms. Chelsea Gray, Assistant Secretary and Board Liaison, reminded everyone in attendance of logistics for the meeting. Ms. Chelsea Gray conducted a roll call to see who was present. The meeting was being held in accordance with HB29, Governor's Amendment 28: Allow policy-making boards to meet

virtually during emergency declarations. The meeting was held by electronic communication means via Zoom. The public was able to view the open session of the meeting via livestream at <https://mssvideo.vcu.edu/BOV>.

PRESIDENT'S REPORT

President Rao began his report by summarizing the Fall 2020 Semester. He acknowledged the hard work of the students, faculty staff and health care team members and that VCU will continue to lead in shaping a better human experience. He recognized the students that will be graduating on Saturday.

He then went on to report that for spring 2021 semester, the university projects a best-case financial impact of \$75 million and a worst-case impact of \$144 million. For the VCU Health System, there will still be \$60 million in unreimbursed revenue losses and this could grow substantially given the probable more severe wave of the pandemic. *Please note that after this statement was made the University released a fiscal update that can be found here:* <https://blogs.vcu.edu/president/2020/12/14/fiscal-update/>.

President Rao announced that the University completed the Make it Real Campaign raising over \$840 million. One of the largest gifts in VCU history was received; \$24 million from the Ken Wright estate through the Wright Foundation. This investment will save and improve lives.

Lastly President Rao introduced four new deans including Dr. Carmenita Higginbotham, dean of the VCU School of the Arts; Dr. Jennifer Malat, dean of Humanities and Sciences; Dr. Dan Bullard, dean of the Graduate School; and Dr. Scott Breuninger, dean of the VCU Honors College. VCU is fortunate to have these new deans as well as the rest of senior leadership focused on student success and other priorities as the University heads into a challenging future.

APPROVAL OF MINUTES

On a motion duly made and seconded the minutes of the September 17-18, 2020 Board of Visitors meeting minutes and October 30, 2020 Board of Visitors Retreat were approved by a roll call vote:

<u>Vote</u>	<u>Ayes</u>	<u>Nays</u>
Mr. Keith T. Parker, Rector	X	
Mr. H. Benson Dendy III, Vice Rector	X	
Ms. Pamela K. El	X	
Ms. Carolina Espinal	X	
Mr. Peter Farrell	X	
Mr. Todd P. Haymore	X	
Dr. Gopinath R. Jadhav	X	
Ambassador Carmen Lomellin	X	
Mr. Ed McCoy	X	
Rev. Tyrone Nelson	X	
Dr. Tonya Parris-Wilkins	X	

Ms. Coleen Santa Ana	X
Mr. Stuart C. Siegel	X
Ms. Alexis Swann	X
Dr. Shantaram Talegaonkar	X
Mr. G. Richard Wagoner, Jr.	X

A copy of the minutes can be found on the VCU website at the following webpage
<https://president.vcu.edu/board/minutes/>.

PUBLIC COMMENT PERIOD

Ms. Chelsea Gray, Assistant Secretary and Board Liaison, reminded the Board that written comments were to be received prior to the meeting via an online portal and that no responses were received. She then reminded the Board that there would be a public comment session at this meeting and that no one pre-registered to speak.

STRATEGIC TASK FORCE UPDATE

Rector Parker directed that Mr. H. Benson Dendy, III, provide an update on the Strategic Task Force. Mr. H. Benson Dendy, III reported that Dr. LeGrande provided an overview of spring enrollment and fall admissions. Provost Hackett, Dr. LeGrande and their teams are working diligently on strategies to improve student success and recruitment. Marketing communications efforts have been expanded to support these strategies.

He then reported that Dr. Mandara Savage, Executive Director of Online@VCU, updated the Task Force on online education activities since March 2020. Actions have been taken looking at permanently establishing an online modality beyond just the duration of the coronavirus pandemic. Dr. Savage reported an update on the Noodle contract. Noodle wants to move towards a full Summer start program. Dr. Savage had provided an overview of planned actions for the spring.

There being no further business Mr. Dendy referred back to the Rector.

GOVERNANCE AND COMPENSATION REPORT

Rector Parker directed that Mr. H. Benson Dendy, III, begin the Governance and Compensation report. Mr. Dendy asked that Ms. Chelsea Gray, Assistant Secretary and Board Liaison, give a report on action items. Ms. Gray explained that the Governance and Compensation Committee Charter and Planner were presented at the September 2020 Board meeting with no changes from the previous year. The Dashboard was provided by email and BoardEffect to board members.

Mr. Dendy then moved that the Board approve the Governance and Compensation Committee Charter and Planner. After a second being duly made, the Board unanimously approved the Governance and Compensation Committee Charter, Planner, and Dashboard by a roll call vote as follows:

<u>Vote</u>	<u>Ayes</u>	<u>Nays</u>
Mr. Keith T. Parker, Rector	X	
Mr. H. Benson Dendy III, Vice Rector	X	
Ms. Pamela K. El	X	
Ms. Carolina Espinal	X	
Mr. Peter Farrell	X	
Mr. Todd P. Haymore	X	
Dr. Gopinath R. Jadhav	X	
Ambassador Carmen Lomellin	X	
Mr. Ed McCoy	X	
Rev. Tyrone Nelson	X	
Dr. Tonya Parris-Wilkins	X	
Ms. Coleen Santa Ana	X	
Mr. Stuart C. Siegel	X	
Ms. Alexis Swann	X	
Dr. Shantaram Talegaonkar	X	
Mr. G. Richard Wagoner, Jr.	X	

A copy of the Committee Charter, Planner, and Dashboard are attached hereto as ***Attachment A*** and are made a part hereof.

Mr. Dendy moved that the Board of Visitors of Virginia Commonwealth University convene a closed session under Section 2.2-3711 (A) (1) of the Freedom of Information Act for the discussion of personnel matters, more specifically relating to the performance evaluation of the President and performance evaluation and/or compensation of various other staff members, including faculty, and the evaluation of performance of certain departments of Virginia Commonwealth University, which will require performance evaluations of specific individuals in those departments; and pursuant to Section 2.2-3711 (A) (23) for the Board of Visitors discussion or consideration of the acquisition by the Virginia Commonwealth University Health System Authority of real property where disclosure would adversely affect the bargaining position or negotiating strategy of the Authority, specifically related to real property to be used for potential expansion of Health System facilities.

The motion was seconded and was approved by a roll call vote:

<u>Vote</u>	<u>Ayes</u>	<u>Nays</u>
Mr. Keith T. Parker, Rector	X	
Mr. H. Benson Dendy III, Vice Rector	X	
Ms. Pamela K. El	X	
Ms. Carolina Espinal	X	
Mr. Peter Farrell	X	
Mr. Todd P. Haymore	X	
Dr. Gopinath R. Jadhav	X	

Ambassador Carmen Lomellin	X
Mr. Ed McCoy	X
Rev. Tyrone Nelson	X
Dr. Tonya Parris-Wilkins	X
Ms. Coleen Santa Ana	X
Mr. Stuart C. Siegel	X
Ms. Alexis Swann	X
Dr. Shantaram Talegaonkar	X
Mr. G. Richard Wagoner, Jr.	X

Following the closed session, the board members re-entered the open session. Mr. Dendy called the meeting to order. On motion duly made and seconded the following resolution of certification was approved by a roll call vote:

Resolution of Certification

BE IT RESOLVED, that the Board of Visitors of Virginia Commonwealth University certifies that, to the best of each member's knowledge, (i) only public business matters lawfully exempted from open meeting requirements under this chapter were discussed in the closed meeting to which this certification resolution applies, and (ii) only such public business matters as were identified in the motion by which the closed session was convened were heard, discussed or considered by the Board.

<u>Vote</u>	<u>Ayes</u>	<u>Nays</u>
Mr. Keith T. Parker, Rector	X	
Mr. H. Benson Dendy III, Vice Rector	X	
Ms. Pamela K. El	X	
Ms. Carolina Espinal	X	
Mr. Peter Farrell	X	
Mr. Todd P. Haymore	X	
Dr. Gopinath R. Jadhav	X	
Ambassador Carmen Lomellin	X	
Mr. Ed McCoy	X	
Rev. Tyrone Nelson	X	
Dr. Tonya Parris-Wilkins	X	
Ms. Coleen Santa Ana	X	
Mr. Stuart C. Siegel	X	
Ms. Alexis Swann	X	
Dr. Shantaram Talegaonkar	X	
Mr. G. Richard Wagoner, Jr.	X	

All members present responding affirmatively, the resolution of certification was adopted.

Mr. Dendy then moved that the Board approve Faculty Tenure appointments, changes in status and tenure recommendations, as presented in closed session. After a second being duly made, the Board unanimously approved Faculty Tenure appointments, changes in status and tenure recommendations by a roll call vote as follows:

<u>Vote</u>	<u>Ayes</u>	<u>Nays</u>
Mr. Keith T. Parker, Rector	X	
Mr. H. Benson Dendy III, Vice Rector	X	
Ms. Pamela K. El	X	
Ms. Carolina Espinal	X	
Mr. Peter Farrell	X	
Mr. Todd P. Haymore	X	
Dr. Gopinath R. Jadhav	X	
Ambassador Carmen Lomellin	X	
Mr. Ed McCoy	X	
Rev. Tyrone Nelson	X	
Dr. Tonya Parris-Wilkins	X	
Ms. Coleen Santa Ana	X	
Mr. Stuart C. Siegel	X	
Ms. Alexis Swann	X	
Dr. Shantaram Talegaonkar	X	
Mr. G. Richard Wagoner, Jr.	X	

There being no further business Mr. Dendy referred back to the Rector.

ACADEMIC & HEALTH AFFAIRS REPORT

Rector Parker asked Ms. Coleen Santa Ana and Mr. G. Richard Wagoner, Jr., Co-Chairs of the Academic and Health Affairs Committee, to provide a report. Ms. Santa Ana and Mr. Wagoner began by asking Provost Gail Hackett to present the actions items.

Ms. Santa Ana then moved that the Board approve the following 11 items: 1) Proposal to create a Graduate Certificate in Media and Culture (*new*); 2) Proposal to create a Post-Professional Certificate in Adult-Gerontology Acute Care Nurse Practitioner (*new*); 3) Proposal to create a Post-Professional Certificate in Family Nurse Practitioner (*new*); 4) Proposal to create a Post-Professional Certificate in Psychiatric Mental Health Nurse Practitioner (*new*); 5) Proposal to request a credit hour reduction to the Master of Science in Human Genetics in the School of Medicine (*modification*); 6) Proposal to reduce the credit hours for the Master of Science in Anatomy and Neurobiology (*modification*); 7) Proposal to reduce the credit hours for the Master of Science in Biostatistics (*modification*); 8) Proposal to discontinue the Master of Science in Nurse Anesthesia in the College of Health Professions (*discontinue*); 9) Proposal to create the Center for Biological Data Science (*organizational change*); 10) Revised Honor and Standards of Academic Conduct Policy (*revision*); 11) Revised Additional Sources of Academic Credit Policy (*revision*). After a second being duly made, the Board unanimously approved the 11 action items by a roll call vote as follows:

<u>Vote</u>	<u>Ayes</u>	<u>Nays</u>
Mr. Keith T. Parker, Rector	X	
Mr. H. Benson Dendy III, Vice Rector	X	
Ms. Pamela K. El	X	
Ms. Carolina Espinal	X	
Mr. Peter Farrell	X	
Mr. Todd P. Haymore	X	
Dr. Gopinath R. Jadhav	X	
Ambassador Carmen Lomellin	X	
Rev. Tyrone Nelson	X	
Dr. Tonya Parris-Wilkins	X	
Ms. Coleen Santa Ana	X	
Mr. Stuart C. Siegel	X	
Ms. Alexis Swann	X	
Dr. Shantaram Talegaonkar	X	
Mr. G. Richard Wagoner, Jr.	X	

Mr. Ed McCoy was not present for the vote.

A copy of the 11 action items are attached hereto as ***Attachment B*** and are made a part hereof.

Provost Gail Hackett and Senior Vice President Art Kellermann provided brief updates on priorities in their areas. A copy of Dr. Hackett's update presentation is attached hereto as ***Attachment C*** and is made a part hereof. Dr. Kellermann's update presentation is attached hereto as ***Attachment D*** and is made a part hereof.

Dr. Aashir Nasim, vice president for institutional equity, effectiveness and success, provided a brief update from the VCU Committee on Commemoration and Memorials; VCU Climate Advisory reports; and general policy and program actions.

Dr. Hackett provided an overview of VCU's integrated approach to career readiness for undergraduate students. This model is designed to provide career preparation exploration, education, and opportunities at all stages of their academic career. The model is comprised of four major components: career advising, co-curricular engagement, curricular engagement, and university support and infrastructure. Dr. Hackett's presentation is attached hereto as ***Attachment E*** and is made a part hereof.

Dr. D'Arcy Mays, associate professor and chair of the Department of Statistical Sciences and Operations Research in the College of Humanities and Sciences and VCU's Faculty Athletics Representative (FAR), presented the annual report on student athletes. Overall student athletes are performing well academically. During the 2019-20 academic year 231 VCU student athletes earned a cumulative GPA of 3.0 or higher and earned a spot on the Atlantic 10 Commissioner's Honor Roll. VCU earned the NCAA Division 1 academic unit by satisfying two metrics related

to student athletes' Graduation Success Rate and Academic Progress Rate. Dr. Mays' presentation is attached hereto as ***Attachment F*** and is made a part hereof. The student representative, Kristen Richey, faculty representative, Scott Street; and staff representative, Saher Randhawa, provided a brief update on recent activities within their respective constituencies.

There being no further business Ms. Santa Ana and Mr. Wagoner referred back to the Rector.

VCU STATE OF RESEARCH

Dr. Srirama Rao, Vice President for Research and Innovation, provided an overview of the status of VCU's research enterprise. Dr. Rao reviewed how VCU's foundational efforts over the years have set the stage for record funding, publications in the most reputable journals, and prominence in multiple areas of research. He provided an update on the Strategic Research Priorities Plan (SRPP) that is being developed by faculty across the University, and that is aligned with the goals set forth in Quest 2025: Together We Transform. A copy of Dr. Rao's presentation is attached hereto as ***Attachment G*** and is made a part hereof.

Rector Parker thanked Dr. Rao for his presentation.

BREAK

AUDIT, INTEGRITY & COMPLIANCE REPORT

Rector Parker asked Dr. Talegaonkar, Chair of the Audit, Integrity and Compliance Committee, to provide a report. Dr. Talegaonkar began by asking Ms. Karen Helderman, Executive Director of Audit and Compliance Service to present the current status of the dashboard measures. Indicators for Data Security, Compliance Oversight and ERM Mitigation plans were yellow and other indicators were green.

Mike Reinholtz, audit director with the Auditor of Public Accounts presented the university's financial statement audit results for the year ending June 30, 2020. The university is receiving an unmodified or clean opinion meaning the financial statements are presented fairly in accordance with the required accounting principles. Mr. Reinholtz will be emailing each board member the final audited financial statements and the report on internal controls and compliance soon.

Monal Patel, associate Vice Provost for Institutional Research and Decision Support, provided an updated of the university's data governance program and brought new committee members up to date on these efforts.

Karen Helderman updated the committee on the status of the corrective action plans related to the Annual Report of Audit Follow-Up's as presented at the September 2020 meeting. No corrective actions are due for this quarter and therefore nothing has changed since the original report was issued. Karen Helderman also discussed the Department of Athletics audit report noting no board level findings.

A copy of these presentations are attached hereto as ***Attachment H*** and are made a part hereof.

Ms. Carolina Espinal moved that the Virginia Commonwealth University Board of Visitors convene into closed session under Section 2.2-3711 (A) (1) of the Virginia Freedom of Information Act for the discussion of personnel matters, more specifically relating to an audit report addressing individual use of discretionary funds and travel; and Section 2.2-3711 (A) (7) and (8) of the Virginia Freedom of Information Act for consultation with legal counsel pertaining to specific legal matters requiring legal advice by counsel and actual or probable litigation, where such consultation or briefing in open meeting would adversely affect the negotiating or litigating posture of the university, namely a survey of and status report of the university's positions in potential and current litigation in state and federal courts and other legal matters relating to pending investigations; and under section 2.2-3711 (A) (19) for discussion of specific cybersecurity vulnerabilities and briefing by staff concerning actions taken to respond to such matters, specifically pertaining to human subjects research data security and related IT processes.

The motion was seconded and was approved by a roll call vote:

<u>Vote</u>	<u>Ayes</u>	<u>Nays</u>
Mr. Keith T. Parker, Rector	X	
Mr. H. Benson Dendy III, Vice Rector	X	
Ms. Pamela K. El	X	
Ms. Carolina Espinal	X	
Mr. Peter Farrell	X	
Mr. Todd P. Haymore	X	
Dr. Gopinath R. Jadhav	X	
Ambassador Carmen Lomellin	X	
Mr. Ed McCoy	X	
Dr. Tonya Parris-Wilkins	X	
Ms. Coleen Santa Ana	X	
Mr. Stuart C. Siegel	X	
Ms. Alexis Swann	X	
Dr. Shantaram Talegaonkar	X	
Mr. G. Richard Wagoner, Jr.	X	

Mr. Ed McCoy was not present for the vote.

Following the closed session, the board members re-entered the open session. Ms. Espinal called the meeting to order. On motion duly made and seconded the following resolution of certification was approved by a roll call vote:

Resolution of Certification

BE IT RESOLVED, that the Board of Visitors of Virginia Commonwealth University certifies that, to the best of each member's knowledge, (i) only public business matters lawfully exempted from open meeting requirements under this chapter were discussed in the closed meeting to

which this certification resolution applies, and (ii) only such public business matters as were identified in the motion by which the closed session was convened were heard, discussed or considered by the Board.

<u>Vote</u>	<u>Ayes</u>	<u>Nays</u>
Mr. Keith T. Parker, Rector	X	
Mr. H. Benson Dendy III, Vice Rector	X	
Ms. Pamela K. El	X	
Ms. Carolina Espinal	X	
Mr. Peter Farrell	X	
Mr. Todd P. Haymore	X	
Dr. Gopinath R. Jadhav	X	
Ambassador Carmen Lomellin	X	
Mr. Ed McCoy	X	
Dr. Tonya Parris-Wilkins	X	
Ms. Coleen Santa Ana	X	
Mr. Stuart C. Siegel	X	
Ms. Alexis Swann	X	
Dr. Shantaram Talegaonkar	X	
Mr. G. Richard Wagoner, Jr.	X	

Mr. Ed McCoy was not present for the vote. All members present responding affirmatively, the resolution of certification was adopted.

There being no further business Dr. Talegaonkar referred back to the Rector.

UNIVERSITY RESOURCES REPORT

Rector Parker asked Ms. Carolina Espinal, Chair of the University Resources Committee, to provide a report. Ms. Espinal began by asking Mr. Jay Davenport, Vice President for Development and Alumni Relations provided a review of the fundraising metrics and updates including:

- VCU's development team has raised \$31.1M in new gifts and pledges as of July 1, 2020.
- Jay reported on the success of the Make it Real Campaign for VCU that finished on June 30, exceeding its \$750M goal. Ten schools or units exceeded their fundraising goals.
- The top 10 gifts account for 25% of the entire campaign total. Jay reported that 33,601 alumni donated to the campaign, which is 22% of total donors.
- Out of the 113,203 donors, 65% were FIRST time donors.

A copy of Mr. Davenport's presentation is attached hereto as *Attachment I* and is made a part hereof.

Ms. Carolina Espinal then moved that the Board of Visitors of Virginia Commonwealth University convene a closed session under Section 2.2-3711 (A) (9) of the Virginia Freedom of Information Act for the discussion of gifts, bequests, and fund-raising activities of the

University, namely the Named Funds and Spaces Report, and the Approved Named Funds under \$50,000.

The motion was seconded and was approved by a roll call vote:

<u>Vote</u>	<u>Ayes</u>	<u>Nays</u>
Mr. Keith T. Parker, Rector	X	
Mr. H. Benson Dendy III, Vice Rector	X	
Ms. Pamela K. El	X	
Ms. Carolina Espinal	X	
Mr. Peter Farrell	X	
Mr. Todd P. Haymore	X	
Dr. Gopinath R. Jadhav	X	
Ambassador Carmen Lomellin	X	
Mr. Ed McCoy	X	
Dr. Tonya Parris-Wilkins	X	
Ms. Coleen Santa Ana	X	
Mr. Stuart C. Siegel	X	
Ms. Alexis Swann	X	
Dr. Shantaram Talegaonkar	X	
Mr. G. Richard Wagoner, Jr.	X	

Rev. Tyrone Nelson was not present for the vote.

Following the closed session, the board members re-entered the open session. Ms. Espinal called the meeting to order. On motion duly made and seconded the following resolution of certification was approved by a roll call vote:

Resolution of Certification

BE IT RESOLVED, that the Board of Visitors of Virginia Commonwealth University certifies that, to the best of each member's knowledge, (i) only public business matters lawfully exempted from open meeting requirements under this chapter were discussed in the closed meeting to which this certification resolution applies, and (ii) only such public business matters as were identified in the motion by which the closed session was convened were heard, discussed or considered by the Board.

<u>Vote</u>	<u>Ayes</u>	<u>Nays</u>
Mr. Keith T. Parker, Rector	X	
Mr. H. Benson Dendy III, Vice Rector	X	
Ms. Pamela K. El	X	
Ms. Carolina Espinal	X	
Mr. Peter Farrell	X	

Virginia Commonwealth University
Board of Visitors
December 11, 2020 Minutes

Mr. Todd P. Haymore	X
Dr. Gopinath R. Jadhav	X
Ambassador Carmen Lomellin	X
Mr. Ed McCoy	X
Dr. Tonya Parris-Wilkins	X
Ms. Coleen Santa Ana	X
Mr. Stuart C. Siegel	X
Ms. Alexis Swann	X
Dr. Shantaram Talegaonkar	X
Mr. G. Richard Wagoner, Jr.	X

Rev. Tyrone Nelson was not present for the vote. All members present responding affirmatively, the resolution of certification was adopted.

Ms. Espinal then moved that the Board approve the Named Funds and Spaces Report, and the Approved Named Funds under \$50,000. After a second being duly made, the Board unanimously approved the Named Funds and Spaces Report, and the Approved Named Funds under \$50,000 by a roll call vote as follows:

<u>Vote</u>	<u>Ayes</u>	<u>Nays</u>
Mr. Keith T. Parker, Rector	X	
Mr. H. Benson Dendy III, Vice Rector	X	
Ms. Pamela K. El	X	
Ms. Carolina Espinal	X	
Mr. Peter Farrell	X	
Mr. Todd P. Haymore	X	
Dr. Gopinath R. Jadhav	X	
Ambassador Carmen Lomellin	X	
Mr. Ed McCoy	X	
Dr. Tonya Parris-Wilkins	X	
Ms. Coleen Santa Ana	X	
Mr. Stuart C. Siegel	X	
Ms. Alexis Swann	X	
Dr. Shantaram Talegaonkar	X	
Mr. G. Richard Wagoner, Jr.	X	

Rev. Tyrone Nelson was not present for the vote.

Ms. Espinal then asked Ms. Karah L. Gunther, Executive Director of Government Relations and Health Policy, and Mr. Matthew Conrad, Executive Director of Government Relations, to provide an update. Mr. Conrad and Ms. Gunther shared the results of a community poll assessing perceptions of VCU and VCUHS in the immediate Richmond region. These results will be relied upon to, in part, shape messages from government relations, university relations, enrollment

management, and community engagement, among others. A copy of their presentation is attached hereto as ***Attachment J*** and is made a part hereof.

Ms. Espinal then turned to Ms. Pamela Lepley, Vice President for University Relations to provide a University Relations update. Ms. Lepley reported that media coverage, social media, web site and other owned media and paid advertising metrics are on track for the first half of the fiscal year. Round-the-clock COVID communications effort continue. The One VCU: Responsible Together web site and newsletters as well as the daily COVID dashboard remain effective communications modes with hundreds of thousands of page views. Student recruitment marketing is fully underway with the first adult learner campaign that has met conversion and enrollment goals for Spring semester. The undergraduate recruitment and awareness campaign is significantly outperforming last year's campaign in conversions, funneling potential in and out-of-state students and families to the applications web site, email lists and other direct connections to Admissions.

A copy of Ms. Lepley's presentation is attached hereto as ***Attachment K*** and is made a part hereof.

There being no further business Ms. Espinal referred back to the Rector.

FINANCE, BUDGET & INVESTMENT REPORT

Rector Parker asked Mr. Stuart Siegel, Chair of the Finance, Budget and Investment Committee, to provide a report. Mr. Siegel began by pm by asking Ms. Gray to present the resolution for restructuring of the Virginia College Building Authority (VCBA) Bonds. Ms. Gray recommended a restructuring of the VCBA bonds to produce significant savings over the next five years yielding approximately \$37 million.

Mr. Siegel then moved that the Board approve the Resolution of the Board of Visitors of Virginia Commonwealth University Authorizing the Restructuring of Indebtedness with the Virginia College Building Authority. After a second being duly made, the Board unanimously approved the Resolution of the Board of Visitors of Virginia Commonwealth University Authorizing the Restructuring of Indebtedness with the Virginia College Building Authority by a roll call vote as follows:

<u>Vote</u>	<u>Ayes</u>	<u>Nays</u>
Mr. Keith T. Parker, Rector	X	
Mr. H. Benson Dendy III, Vice Rector	X	
Ms. Pamela K. El	X	
Ms. Carolina Espinal	X	
Mr. Peter Farrell	X	
Mr. Todd P. Haymore	X	
Dr. Gopinath R. Jadhav	X	
Ambassador Carmen Lomellin	X	
Mr. Ed McCoy	X	

Virginia Commonwealth University
Board of Visitors
December 11, 2020 Minutes

Dr. Tonya Parris-Wilkins	X
Ms. Coleen Santa Ana	X
Mr. Stuart C. Siegel	X
Ms. Alexis Swann	X
Dr. Shantaram Talegaonkar	X
Mr. G. Richard Wagoner, Jr.	X

Rev. Tyrone Nelson was not present for the vote. All members present responding affirmatively, the resolution was unanimously adopted. A copy of the resolution is attached hereto as ***Attachment L*** and is made a part hereof.

Mr. Siegel asked Dr. Weiss to present the resolution to approve the Comprehensive Emergency Management Plan (CEMP). Dr. Weiss advised that the plan is updated every four years and requires board approval for submission to the State.

Mr. Siegel then moved that the Board approve the Resolution of the Virginia Commonwealth University Resolution Regarding Crisis and Emergency Preparedness Plan. After a second duly made, the Board unanimously approved the Resolution of the Virginia Commonwealth University Resolution Regarding Crisis and Emergency Preparedness Plan by a roll call vote:

<u>Vote</u>	<u>Ayes</u>	<u>Nays</u>
Mr. Keith T. Parker, Rector	X	
Mr. H. Benson Dendy III, Vice Rector	X	
Ms. Pamela K. El	X	
Ms. Carolina Espinal	X	
Mr. Peter Farrell	X	
Mr. Todd P. Haymore	X	
Dr. Gopinath R. Jadhav	X	
Ambassador Carmen Lomellin	X	
Mr. Ed McCoy	X	
Dr. Tonya Parris-Wilkins	X	
Ms. Coleen Santa Ana	X	
Mr. Stuart C. Siegel	X	
Ms. Alexis Swann	X	
Dr. Shantaram Talegaonkar	X	
Mr. G. Richard Wagoner, Jr.	X	

Rev. Tyrone Nelson was not present for the vote. All members present responding affirmatively, the resolution was unanimously adopted. A copy of the resolution is attached hereto as ***Attachment M*** and is made a part hereof.

Mr. Siegel moved that the Board of Visitors of Virginia Commonwealth University convene a closed session under Section 2.2-3711(A)(3) of the Virginia Freedom of Information Act for the discussion or consideration of the acquisition of real property for a public purpose, or of the disposition of publicly held real property, where discussion in an open meeting would adversely

affect the bargaining position or negotiating strategy of the public body, specifically related to the acquisition of real property near or adjacent to the Monroe Park Campus and/or MC Campus for the expansion of campus facilities or real property to be used for administrative purposes. The motion was seconded and was approved by a roll call vote:

<u>Vote</u>	<u>Ayes</u>	<u>Nays</u>
Mr. Keith T. Parker, Rector	X	
Mr. H. Benson Dendy III, Vice Rector	X	
Ms. Pamela K. El	X	
Ms. Carolina Espinal	X	
Mr. Peter Farrell	X	
Mr. Todd P. Haymore	X	
Dr. Gopinath R. Jadhav	X	
Ambassador Carmen Lomellin	X	
Mr. Ed McCoy	X	
Dr. Tonya Parris-Wilkins	X	
Ms. Coleen Santa Ana	X	
Mr. Stuart C. Siegel	X	
Ms. Alexis Swann	X	
Dr. Shantaram Talegaonkar	X	

Rev. Tyrone Nelson was not present for the vote.

Following the closed session, the board members re-entered the open session. Mr. Siegel called the meeting to order. On motion duly made and seconded the following resolution of certification was approved by a roll call vote:

Resolution of Certification

BE IT RESOLVED, that the Board of Visitors of Virginia Commonwealth University certifies that, to the best of each member's knowledge, (i) only public business matters lawfully exempted from open meeting requirements under this chapter were discussed in the closed meeting to which this certification resolution applies, and (ii) only such public business matters as were identified in the motion by which the closed session was convened were heard, discussed or considered by the Board.

<u>Vote</u>	<u>Ayes</u>	<u>Nays</u>
Mr. Keith T. Parker, Rector	X	
Mr. H. Benson Dendy III, Vice Rector	X	
Ms. Pamela K. El	X	
Ms. Carolina Espinal	X	
Mr. Peter Farrell	X	
Mr. Todd P. Haymore	X	

Dr. Gopinath R. Jadhav	X
Ambassador Carmen Lomellin	X
Mr. Ed McCoy	X
Dr. Tonya Parris-Wilkins	X
Ms. Coleen Santa Ana	X
Mr. Stuart C. Siegel	X
Ms. Alexis Swann	X
Dr. Shantaram Talegaonkar	X
Mr. G. Richard Wagoner, Jr.	X

Rev. Tyrone Nelson was not present for the vote. All members present responding affirmatively, the resolution of certification was adopted.

Mr. Siegel asked Ms. Gray to provide her Vice President's report. Ms. Gray gave an update on the following:

- University's Cash Position – Ms. Gray noted the amount of Cash and Investments providing a three-year average noting that approximately 50% of the amount of cash is operating funding with the remaining 50% in restricted funding.
- Related Entity Financial Statements – Ms. Gray provided an overview of the financial statements for those foundations created in support of VCU. All statements resulted in unmodified opinions with no findings.
- Budget Update – Ms. Gray noted that Significant cost saving measures were implemented in FY2020 and FY2021 resulting in:
 - a. Refinancing bond savings of \$10.8M in 2021 and \$37M in the first 5 years
 - b. Hiring freeze and attrition in March 2020 yielding approximately \$5 million.
 - c. Savings and efficiencies from the new procure-to-pay system \$5.2M (projected to be \$16.8M in the first 5 years)
 - d. Spending freeze including travel resulting in approximately \$1M per month.

Mr. Siegel asked Dr. Weiss to provide her Vice President's report. Dr. Weiss provided her update on the Return to Campus Plan for the spring semester including entry testing for residential students and a later start date in response to the COVID19 pandemic.

Dr. Rao acknowledged the extraordinary efforts by Dr. Weiss and her team in response to the handling of this public health crisis. The board also thanked Dr. Weiss and all of the Incident Response Team for their continuing efforts in addressing the COVID19 issues.

A copy of Ms. Gray and Dr. Weiss' presentations are attached hereto as ***Attachment N*** and is made a part hereof.

Mr. Siegel noted that there were several reports for informational purposes, specifically, the Sources and Uses funding for FY20, the Revenue and Expense Quarterly Summary, the VCU Health System and Financial Operations; Capital Projects Update, and SWAM report. There being no further business Mr. Siegel referred back to the Rector.

INTERCOLLEGIATE ATHLETICS REPORT

Rector Parker asked Mr. Todd Haymore, Chair of the Intercollegiate Athletics Committee, to provide a report. Mr. Haymore asked that Mr. McLaughlin provide his report. Mr. McLaughlin reported on the Athletics Diversity, Equity and Inclusion (DEI) Committee and Athletics Governance. The DEI Committee has identified opportunities to embed DEI within the VCU Athletics operational framework

Mr. Haymore moved that the Board of Visitors of Virginia Commonwealth University convene a closed session under Section 2.2-3711(A) (3) of the Virginia Freedom of Information Act for the discussion or consideration of the acquisition of real property for a public purpose, or of the disposition of publicly held real property, where discussion in an open meeting would adversely affect the bargaining position or negotiating strategy of the public body, specifically related to real property to be used in for Intercollegiate Athletics. The motion was seconded and was approved by a roll call vote:

<u>Vote</u>	<u>Ayes</u>	<u>Nays</u>
Mr. Keith T. Parker, Rector	X	
Mr. H. Benson Dendy III, Vice Rector	X	
Ms. Pamela K. El	X	
Ms. Carolina Espinal	X	
Mr. Peter Farrell	X	
Mr. Todd P. Haymore	X	
Dr. Gopinath R. Jadhav	X	
Ambassador Carmen Lomellin	X	
Mr. Ed McCoy	X	
Dr. Tonya Parris-Wilkins	X	
Ms. Coleen Santa Ana	X	
Mr. Stuart C. Siegel	X	
Ms. Alexis Swann	X	
Dr. Shantaram Talegaonkar	X	

Rev. Tyrone Nelson was not present for the vote.

Following the closed session, the board members re-entered the open session. Mr. Haymore called the meeting to order. On motion duly made and seconded the following resolution of certification was approved by a roll call vote:

Resolution of Certification

BE IT RESOLVED, that the Board of Visitors of Virginia Commonwealth University certifies that, to the best of each member's knowledge, (i) only public business matters lawfully exempted from open meeting requirements under this chapter were discussed in the closed meeting to which this certification resolution applies, and (ii) only such public business matters as were

identified in the motion by which the closed session was convened were heard, discussed or considered by the Board.

<u>Vote</u>	<u>Ayes</u>	<u>Nays</u>
Mr. Keith T. Parker, Rector	X	
Mr. H. Benson Dendy III, Vice Rector	X	
Ms. Pamela K. El	X	
Ms. Carolina Espinal	X	
Mr. Peter Farrell	X	
Mr. Todd P. Haymore	X	
Dr. Gopinath R. Jadhav	X	
Ambassador Carmen Lomellin	X	
Mr. Ed McCoy	X	
Dr. Tonya Parris-Wilkins	X	
Ms. Coleen Santa Ana	X	
Mr. Stuart C. Siegel	X	
Ms. Alexis Swann	X	
Dr. Shantaram Talegaonkar	X	
Mr. G. Richard Wagoner, Jr.	X	

Rev. Tyrone Nelson was not present for the vote. All members present responding affirmatively, the resolution of certification was adopted.

Mr. Haymore stated there was one action item from the closed session and asked Dr. Meredith Weiss to read the resolution in relation to real estate. Mr. Haymore moved that the Board approve the Resolution of the Board of Visitors of Virginia Commonwealth University Property Acquisition. After a second being duly made, the Board unanimously approved the Resolution of the Board of Visitors of Virginia Commonwealth University Property Acquisition by a roll call vote as follows:

<u>Vote</u>	<u>Ayes</u>	<u>Nays</u>
Mr. Keith T. Parker, Rector	X	
Mr. H. Benson Dendy III, Vice Rector	X	
Ms. Pamela K. El	X	
Ms. Carolina Espinal	X	
Mr. Peter Farrell	X	
Mr. Todd P. Haymore	X	
Dr. Gopinath R. Jadhav	X	
Ambassador Carmen Lomellin	X	
Mr. Ed McCoy	X	
Dr. Tonya Parris-Wilkins	X	
Ms. Coleen Santa Ana	X	
Mr. Stuart C. Siegel	X	
Ms. Alexis Swann	X	

Virginia Commonwealth University
Board of Visitors
December 11, 2020 Minutes

Dr. Shantaram Talegaonkar	X
Mr. G. Richard Wagoner, Jr.	X

Rev. Tyrone Nelson was not present for the vote. All members present responding affirmatively, the resolution was unanimously adopted. A copy of the resolution is attached hereto as ***Attachment P*** and is made a part hereof.

There being no further business Mr. Haymore referred back to the Rector.

ADJOURNMENT

There being no further business, Rector Parker, adjourned the meeting at 2:42 p.m.

ATTACHMENT A

Virginia Commonwealth University

Board of Visitors


Governance and Compensation Committee

DASHBOARD


2020-2021

Goal 1: Review of bylaws and University governing documents


Objectives:

- Annual bylaw review and amendments as necessary 

Bylaws were reviewed; and revised and restated on December 13, 2019

- Review board policies [On-going] 

New and revised policies will be brought to committee as needed; standing item as necessary

- Review BOV compliance with statutes regulations {On-going} 

Goal 2: Alignment between VCU and VCU affiliated entities when possible


Objectives:

- Continue to monitor compliance of VCU affiliated entities with management agreements and conflict of interest statements 

All agreements have been received and are currently under review; VP of Finance and Administration provides annually a report on the financials of the Foundations.

Goal 3: Oversight and management of Annual Presidential Evaluation and Compensation Process


Objectives:

- Continue to conduct Presidential Evaluations in compliance with the Presidential Evaluation and Compensation Policy 

Review Presidential Evaluation and Compensation Policy and provide feedback to staff –Policy was Adopted December 8, 2017;

Goal 4: Oversight of Board Training and Development

Objectives:

- To Improve Board Members' knowledge of not only the institution, but also of a board members duties and responsibilities, and to bridge Board knowledge gaps 

Consider Board training options, including a review of the VCU New Board of Visitors Member Orientation and the VCU Board of Visitors Retreat. Both the Orientation and Retreat were completed for 2020.

Virginia Commonwealth University
Board of Visitors
Governance and Compensation Committee Meeting Planner

A=Annually; Q=Quarterly; AN=As Necessary/Required Q1, Q2, Q3, Q4 based on Fiscal Year (July – June)	Frequency			Planned Timing				
	A	Q	AN		Q1	Q2	Q3	Q4
				Aug	Sept	Dec	Mar	May
A. General								
1. Adopt a formal written charter that specifies the Committee’s scope of responsibility. The charter should be reviewed and updated as necessary.	X				X			
2. Maintain minutes of open session meetings and consistent with state law, meet in closed session when applicable.		X			X	X	X	X
3. Report Committee actions to the Board of Visitors with such recommendations as the Committee may deem appropriate.		X			X	X	X	X
4. Become well acquainted with all of the information and pertinent facts under the purview of the Committee.			X					
B. Evaluation and Compensation								
1. Review and recommend approval of Presidential Evaluation Policy and Timeline.			X					
2. Review Presidential Goals as outlined in the Presidential Evaluation Policy		X		X	x	x	x	x
3. Review Results of Presidential Evaluation; the Proposed Presidential Compensation and the Proposed Presidential Goals	X			X				
C. Administration								
1. Review committee dashboard		X			X	X	X	X
2. Review and approve any significant changes to the Committee calendar and charter.	X				X			
3. Review best practices for board governance, including review of the current board of visitor’s statement of governance and governance training sessions.	X				X			
4. Review the set of qualifications and competencies for membership on the board as needed.	X				X			
5. Review Board Policies, and make recommended changes as deemed necessary			X					
6. Review BOV Bylaws and recommend changes as deemed necessary			X					

A=Annually; Q=Quarterly; AN=As Necessary/Required				Frequency			Planned Timing				
Q1, Q2, Q3, Q4 based on Fiscal Year (July – June)				A	Q	AN		Q1	Q2	Q3	Q4
							Aug	Sept	Dec	Mar	May
7.	Review orientation and continuing education process for visitors that includes training on the Virginia Freedom of Information Act (§ 2.2-3700 et seq.)			X							X
8.	Develop, oversee, and review BOV member compliance with the code of ethics for visitors.			X		X			X		
9.	Conduct a bi-annual Board Assessment - to be conducted in FY 2018-2019					X					
D. Shared Governance											
1.	Review the BOV and affiliated entities’ bylaws, charters, and management agreements for agreed upon common terms and conditions, as appropriate, and to make recommended changes as deemed necessary					X					
2.	Review and recommend approval of the guidelines for VCU affiliated entities with regard to compliance (e.g., conflict of interest, investment management, etc.)					X					

**REVISED DRAFT
VIRGINIA COMMONWEALTH UNIVERSITY
BOARD OF VISITORS**

GOVERNANCE AND COMPENSATION COMMITTEE CHARTER

I. PURPOSE

The primary purpose of the Governance and Compensation (“Committee”) is to assist the Board of Visitors in fulfilling its objectives and responsibilities related to applicable policy/ies and oversight of:

- University Governance Issues
- Relationship with affiliated VCU Entities
- BOV Nominations to Governor
- Presidential Evaluation and Compensation Process

The Committee is responsible for reviewing University Governance Policies and make recommendations to the Board of Visitors for the purpose of maintaining sound governance. In addition, the Committee will serve in the role of the Presidential Evaluation and Compensation Committee per the policy which will be reviewed annually. University management is responsible for day to day operation of the University within the established authorities, under the direct guidance of the President.

II. COMPOSITION AND INDEPENDENCE

The Committee will be comprised of three or more Visitors. In addition to complying with the Commonwealth of Virginia’s Conflict of Interest laws and any University policies, each member must be free from any financial, family or other material personal relationship that, in the opinion of the Board or the Committee members, would impair their independence from management and the University. Committee members should also refrain from activities that a reasonable person would view as unethical or contrary to the institutional mission.

III. RESPONSIBILITIES

In performing its oversight responsibilities, the Committee shall:

A. General:

1. Adopt a formal written charter that specifies the Committee’s scope of responsibility. The charter should be reviewed annually and updated as necessary.
2. Maintain minutes of open session meetings and consistent with state law, meet in closed session when applicable.
3. Report Committee actions to the Board of Visitors with such recommendations as the Committee may deem appropriate.
4. Become well acquainted with all of the information and pertinent facts under the purview of the Committee.

5. Ensure that the institution is operating appropriately with regard to governance.

B. Shared Governance:

1. Review the BOV and affiliated entities' bylaws, charters, and management agreements for inclusion of agreed upon common elements, as appropriate.

Review and recommend approval of the guidelines for VCU affiliated entities with regard to compliance (e.g., conflict of interest, investment management, COC participation, etc....)

C. Evaluation and Compensation:

1. Review and recommend approval of Presidential Evaluation Policy and Timeline.
2. Review Presidential Goals as outlined in the Presidential Evaluation Policy
3. Review Results of Evaluation; the Proposed Compensation and Proposed Presidential Goals

D. Administration:

1. Review committee dashboard.
2. Review and approve any significant changes to the Committee calendar and charter.
3. Review best practices for board governance, including review of the current board of visitor's statement of governance and governance training sessions.
4. Review the set of qualifications and competencies for membership on the board as needed.
5. Review Board Policies.
6. Review BOV Bylaws to determine if same are in compliance with legislation and requirements of accreditation bodies (e.g., SACS).
7. Review orientation and continuing education process for visitors that includes training on the Virginia Freedom of Information Act (§ 2.2-3700 et seq.) Create, monitor, oversee, and review compliance with a code of ethics for visitors

IV. MEETINGS

The Committee will meet at least four times annually. Additional meetings may occur more frequently as circumstances warrant. Senior leadership will coordinate with the Committee Chair prior to each Committee meeting to finalize the meeting agenda and review the matters to be discussed.

ATTACHMENT B

Virginia Commonwealth University Graduate Certificate Program

Name of Certificate
Media and Culture

CIP Code
09.0102

Initiation Date
Fall 2021

Description of Certificate

The purpose of the certificate program in Media and Culture is to advance the knowledge, skills and abilities of communication professionals, and those seeking to lead communication organizations in new roles. Students will be trained to understand the legal and ethical issues affecting media industries and develop innovative solutions to communication issues. Students will also take elective courses to develop new skills and best practices in the field. Upon completion of this certificate, graduates will be able to demonstrate higher level skills in communication practice such as contemporary leadership skills, mastery in legal and ethical communication issues, and media diversity adeptness, and depending on their focus area, media economics, news analytics, data journalism, strategic communication writing and/or public relations skills, giving them the ability to be competitive for leading roles in various communication positions.

Target Audience

The intended target audience for the proposed certificate program include professionals with a background in mass media, journalism and strategic communication. This certificate is primarily targeted toward prospective students with academic and practical background in communication or a closely related field.

Time to Complete

The certificate program will be offered to students on a part-time basis (6 credits per semester). Students will begin the proposed certificate program in the fall.

Degree-seeking and non-degree-seeking students can complete the certificate program in 1 academic year (2 semesters) if maintaining a course load of 6 credits per semester/part-time status. Degree-seeking and non-degree-seeking students can complete the certificate program in 2 academic years (4 semesters) if maintaining a course load of 3 credits per semester/part-time status.

Admission

The admission requirements outlined below will apply to all students. All applicants to the graduate certificate program are required to meet the admission requirements of the VCU

Graduate School. Applicants will be required to submit the following materials to the Graduate School Admissions Office:

- Application form and application fee
- Three letters of recommendation, professional and/or academic
- Official undergraduate transcripts from all schools attended
- A statement of purpose outlining career goals
- A resume stating relevant work experience
- A plan of study, required by the School

No transfer credit hours are accepted for this certificate program. Credits from a degree already awarded cannot be applied toward the certificate.

For international students, the following is required:

- Submit an official transcript evaluation from a recognized foreign educational credentials evaluation service accredited by the National Association of Credential Evaluation Services (NACES) or the American Association of Collegiate Registrars and Admissions Officers (AACRAO).
- A Test of English as a Foreign Language (TOEFL) minimum composite score of 100 for the Internet Based Test (IBT) or 600 for the paper-based score; or an International English language Testing System (IELTS) score minimum of 6.5 on the academic exam.
- A score of 68 or higher on the VCU English Language Program Compression test. Students who do not achieve a score of 68 will be placed in the appropriate level English language proficiency courses.

Curriculum Requirements

The curriculum will prepare students to demonstrate higher level skills and critical thinking for communication in the areas of media law and ethics as well as leadership. Course work will focus on the legal and ethical framework of modern media and practice and decision-making in executive communications. Students will gain an understanding of mass media, journalism and/or strategic communication practice.

Program Requirements

Number of Credit Hours: 12

Required Course: 6 credit hours

MASC 675: Leadership in Action (3)

MASC 676: Media Law and Ethics (3)

Restricted Elective Courses: 6 credits hours

Students choose two courses from the following.

MASC 618: Media Economics and Management (3)

MASC 643: Digital Management and Analytics (3)

MASC 644: Computational Journalism (3)

MASC 654: Persuasion (3)

MASC 682: Media Mechanics (3)

MASC 684: Multimedia Storytelling (3)
MASC 685: Strategy (3)
MASC 691: Topics in Mass Communications (3)

Faculty

Faculty appointments in the certificate program are established by the recommendation of the director of graduate studies, a full-time faculty member in the School. Faculty teaching in the certificate program will hold either a doctorate or master's degree in communication. Two full-time faculty and two adjunct faculty from the School will teach the courses in the certificate program.

Two adjuncts will be used to initiate the certificate program. Adjuncts teaching in the certificate program will hold either a doctorate degree in communication or related field or a master's degree in communication or related field with a minimum of five years of professional experience in a communication field and previous teaching experience. Examples of positions held by adjunct faculty include: online editor, multimedia reporter, product manager, public relations strategist, communication executive. Adjunct faculty will be utilized to expose students to real-world experiences and educated professionals working in the field.

Course Delivery Format

This certificate program will be conducted in both a fully online format and in a traditional classroom setting. Both physical space and software to facilitate the synchronous and asynchronous online sessions are required and will be available. VCU possesses the resources, support, and technology necessary for quality online programs. Online programs are supported by VCU Technology Services, the Academic Learning Transformation Laboratory (ALT-Lab), and the Center for Teaching and Learning Excellence. The university's primary learning management system is Canvas. Canvas is centrally supported by VCU Technology Services which provides technical assistance, training, and system administration. Technology Services also supports a portfolio of academic technology for use online courses. The university has sufficient resources to deliver this certificate program.

Resources

Resources required to support the proposed certificate program include existing resources to support current programs such as student support services (e.g., enrollment, help desk, and library, technology services), faculty support services (e.g., copying, contracts, technology services), and general administration (e.g., budgeting and forecasting). A full-time faculty member in the Robertson School will serve as Program Director. Up to one course per semester from the proposed curriculum will be a part of the existing faculty's normal three-course load. No new faculty or staff positions will be created to support the certificate at this time. Resources for adjunct faculty will be available within the existing budget of the College of Humanities and Sciences and the Robertson School. The university has sufficient resources to offer and sustain the certificate program.

Gainful Employment

The certificate will not be included under Gainful Employment regulations. Non-degree seeking students will not be eligible for Title IV funding for this certificate program.

Course Descriptions

Required Courses

MASC 676. Media Law and Ethics. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Study of legal issues affecting the media industries. Analyzes contemporary issues and problems in conventional and new media. Discusses critical and unresolved issues within the legal and ethical framework of modern mass media practice.

MASC 675. Leadership in Action. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Discusses dynamic leadership challenges on both a knowledge and skill basis, including results-driven decision-making in executive communication and overall management. Examines 21st-century topics such as fostering a diverse, equitable and inclusive workplace.

Restricted Electives

MASC 618. Media Economics and Management. 3 Hours.

Semester course; 3 lecture hours. 3 credits. In-depth study of media economics, management and finance based on an examination of major contemporary issues and challenges. Students will interact with faculty, media managers and each other to gain major problem-solving skills for media economics, management and finance.

MASC 643. Digital Management and Analytics. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Students will learn how to use metrics to test ideas, offer audience insights and, ultimately, build relationships with the public they serve. This course will help students master the latest tools and techniques to collect information about news audiences and integrate metric insights into a digital media strategy.

MASC 644. Computational Journalism. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Computational journalism incorporates elements of computer-assisted reporting and data journalism while expanding on these approaches. Students will explore how the combination of algorithms, data and knowledge from the social sciences can supplement the accountability function of journalism and change how stories are discovered, presented, aggregated and monetized.

MASC 654. Persuasion. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Study of communication practices influencing attitudes, opinions, belief systems and behavior change. Establishes the theories and practices used by brands to persuade within the boundaries of truth, diversity, commerce and law.

MASC 682. Media Mechanics. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Focus on newsworthiness, the evolving media landscape, determining relevant and innovative outlets for the message and shaping a message for maximum impact. Includes techniques to effectively reach the media in order to amplify and leverage an organization's story.

MASC 684. Multimedia Storytelling. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Students will learn how to create digital content that resonates with diverse audiences across varying mediums. They will learn how to best showcase and report multimedia stories across visual and audio platforms. News-driven projects will use new trends in technology in addition to photography, video, audio and data visualization.

MASC 685. Strategy. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Explores creative approaches to the strategic thinking process. Discusses best practices used to conceptualize high-level campaigns. Creates a framework for outcome-focused messaging. Students gain a mixed-methods approach to planning and problem solving at all levels of communication.

MASC 691. Topics in Mass Communications. 3 Hours.

Semester course; 3 lecture hours. 3 credits. May be taken for a maximum total of six credits. An advanced study of a selected topic in mass communications. See the Schedule of Classes for specific topic(s) to be offered each semester.

**Virginia Commonwealth University
Post-Professional Certificate**

Program Name

Adult-Gerontology Acute Care Nurse Practitioner

CIP Code

51.3818

Initiation Date

Fall 2021

Description of Certificate

Adult-Gerontology Acute Care Nurse Practitioner (AGACNP) certificate is designed to provide registered nurses (RN's) with new skills and knowledge to care for individuals from adolescents to geriatrics with acute and chronic illnesses. Students will develop knowledge in the diagnosis and management of an illness. Students will learn to provide advanced nursing care to patients from adolescents to geriatrics. Graduates will be prepared to obtain a health history, conduct physical examinations, order and interpret diagnostic studies (e.g. lab tests, scans, x-rays), make a differential diagnosis, prepare a case management plan, prescribe medications and treatments, collaborate with physicians and other health professionals, and counsel patients on health behaviors and treatment options.

Upon completion of the certificate program, graduates will be able to sit for the adult-gerontology acute care nurse practitioner certification, which is a prerequisite for Virginia state licensure application. Certification is offered by the American Nurses Certification Center (ANCC) and the American Association of Critical Care Nurses (AACN).

Target Audience

The target audience consists of licensed registered nurses who wish to gain new skills and knowledge for board certification to provide advanced care for individuals with acute illnesses from adolescents through geriatrics.

Time to Complete

The certificate program is available to non-degree-seeking students who will follow a specific plan of study. Summer enrollment is required. It is anticipated that students who enroll can complete the program in 17 months (4 semesters). All certificate requirements must be completed within eight years of matriculation to the certificate program.

Admission

The admission requirements will apply to all students. All applicants to the proposed certificate program are required to meet the admission requirements of the VCU Graduate School.

Applicants must:

- Submit the VCU Graduate School online application and fee.

- Submit all official college transcripts from each college attended, including concurrent college enrollment transcripts.
- Be eligible for readmission or in good standing at the last college attended.
- Have an earned master's or doctoral degree in nursing from an accredited nursing school (e.g. ACEN, CCNE, CNEA)
- Have a current, unrestricted R.N. license from a U.S. state or territory at the time admissions application is submitted (Applicants without a R.N. license in the U.S. should consult with the Commission on Graduates of Foreign Nursing Schools and the Virginia Board of Nursing for the steps needed to obtain a Virginia R.N. license.)
- Submit three (3) academic and/or professional references.
- Write a personal statement.
- Submit a resume or curriculum vitae.
- Submit transcripts and/or syllabi for gap analysis to determine individual plan of study and semester of entry

Additional admission requirements:

- Students that have not completed three separate comprehensive graduate-level courses in: advanced pathophysiology, advanced health assessment, and advanced pharmacology will need to take them as a component of the post-professional certificate program in order to meet certification requirements.

For international students, the following is required:

- Submit an official transcript evaluation from a recognized foreign educational credentials evaluation service accredited by the National Association of Credential Evaluation Services (NACES) or the American Association of Collegiate Registrars and Admissions Officers (AACRAO).
- A Test of English as a Foreign Language (TOEFL) minimum composite score of 100 for the Internet Based Test (IBT) or 600 for the paper-based score; or an International English Language Testing System (IELTS) score minimum of 6.5 on the academic exam.
- A passing score on the VCU English Language Program Compression test.

Curriculum Requirements

The curriculum will provide a foundation in advanced care for patients from adolescents through geriatrics. Core courses will emphasize the development of knowledge and skills in the identification of acute and chronic illnesses. Coursework will provide knowledge of nursing and medical management of commonly encountered acute and chronic illnesses for patients from adolescents to geriatrics. Courses will educate students in health teaching, guidance, counseling of patients about illness and its prevention. The three practicum courses focus on the synthesis and application of didactic content in the clinical setting and developing and refining skills in eHealth assessment, determining differential diagnoses, and determining health management plans.

Program Requirements

Total number of credit hours: 21 credit hours

NURS 580. Primary Care of the Adult-Gerontology Population (4)
NURS 619. Acute and Complex Health Conditions of the Adult-Gerontology Population (3)
NURS 662. Care of the Adult-Gerontology Population in the Critical Care Settings (4)
NURS 581. Adult-Gerontology Acute Care Practicum I (2)
NURS 669. Adult-Gerontology Acute Care Practicum II (4)
NURS 689. Adult-Gerontology Acute Care Practicum III (4)

Faculty

Faculty are assigned to teach in the certificate program by the Program Director working in collaboration with the Chair of the Department of Adult Health and Nursing Systems. One full time faculty in the Department of Adult Health and Nursing System will teach courses in the certificate program. No additional or new fulltime faculty are required. Minimum requirements for faculty teaching in the certificate programs are:

- A masters or doctoral degree in nursing.
- Content expertise and clinical skills with the patient population and focus of the certificate program.
- Current licensure and national certification as an adult-gerontology nurse practitioner for faculty teaching in the practicum courses.

Adjunct faculty members will be used to teach in the certificate program. The department chair Department of Adult Health and Nursing Systems will hire adjunct faculty to teach didactic or practicum courses when salaried faculty are not available; and practicum courses based on a faculty to student ratio of one to seven. Adjunct faculty teaching in the certificate program will hold a master's or doctorate in nursing, current licensure and national certification.

Course Delivery Format

The certificate program will be conducted in a traditional face-to-face format and web-based formats. Both physical space and software to facilitate the synchronous and asynchronous online sessions are required and will be available. VCU possesses the resources, support, and technology necessary for quality online programs. Online programs are supported by VCU Technology Services, the Academic Learning Transformation Laboratory (ALT-Lab), and the Center for Teaching and Learning Excellence. The university's primary learning management system is Blackboard. Blackboard is centrally supported by VCU Technology Services which provides technical assistance, training, and system administration. Technology Services also supports a portfolio of academic technology for use online courses. Some examples include collaborative tool, VoiceThread, SafeAssign plagiarism detection tools, Respondus, and video capture solutions Kaltura and Echo360. Videoconferencing tools used in synchronous courses (Zoom and Blackboard Collaborate) are also supported by Technology Services.

All faculty assigned to teach in the certificate program are required to complete training offered by the VCU Academic Learning Transformation Lab and the VCU Center for Teaching and Learning Excellence. The University has adequate resources to deliver the modified certificate program.

Resources

Resources required to support the certificate program are met by existing resources to support current programs. These include student support services (e.g., enrollment, help desk, and library, computer and technology support, Blackboard Learning Management System, Zoom videoconferencing), faculty support services, and general administration (e.g., budgeting, forecasting, and enrollment management). Program administration is provided by a full time faculty member in the School of Nursing. No additional faculty positions are needed to support the modified program. VCU has sufficient resources to initiate and sustain the modified certificate program.

Gainful Employment

The proposed certificate is a gainful employment program. The certificate comes under Gainful Employment regulations.

Course Descriptions

NURS 580. Primary Care of the Adult-Gerontology Population. (4 credits)

This course provides content on the primary care management of adolescents through geriatrics. This course focuses on building a foundation of knowledge and clinical decision-making skills related to normal development, health promotion and disease prevention, and the diagnosis and management of common health conditions across the adult-life span. This course includes laboratory experiences.

NURS 619. Acute and Complex Health Conditions of the Adult-Gerontology Population. (3 credits)

This course builds upon knowledge and skills from prior courses and provides content on the management of acute and complex health issues in the adolescent, adult and geriatric population. Students will increase knowledge and decision-making skills in the management of physiologically unstable patients, multiple comorbidities, and appropriate prescribing practices. This course includes laboratory experiences.

NURS 662. Care of the Adult-Gerontology Population in the Critical Care Settings. (4 credits)

This course addresses the diagnosis and management of selected common health and illness changes encountered in adolescents through geriatric in critical care settings. Students will increase their knowledge about the management of common critical illnesses encountered in the adult critical care environment. This course includes laboratory experiences.

NURS 581. Adult-Gerontology Acute Care Practicum I. (2 credits)

This course focuses on the management of adolescents through geriatric with complex health care conditions through precepted experiences. Students have opportunities to focus on the provision of a spectrum of care ranging from disease prevention to acute care management.

NURS 669. Adult-Gerontology Acute Care Practicum II. (4 credits)

This course focuses on acute care management of adolescents through geriatric populations with complex acute, critical and chronic health conditions with emphasis on integrating health

promotion, disease prevention, and risk reduction strategies through precepted clinical experiences.

NURS 689. Adult-Gerontology Acute Care Practicum III. (4 credits)

This course focuses on advanced management of the adolescent through geriatric population with acute, critical, or chronic conditions. Students work with clinical preceptors to assimilate advanced clinical decision making and knowledge of the health system. Acute care skills including prioritization, treatment and coordination of both acute, complex episodic and chronic illnesses. Interdisciplinary collaborative practice skills are emphasized. Technology utilization is refined.

**Virginia Commonwealth University
Post-Professional Certificate**

Program Name

Family Nurse Practitioner

CIP Code

51.3805

Initiation Date

Fall 2021

Description of Certificate

The Family Nurse Practitioner (FNP) certificate is designed to provide registered nurses (RN's) with new skills and knowledge to care for individuals across the lifespan with common acute and chronic illnesses. The program will educate students in the concepts of health maintenance across the lifespan. Students will develop knowledge in the diagnosis of illnesses, and in the management of illness. Students will learn to provide advanced nursing care to patients from infancy to geriatrics. Graduates will be prepared to obtain a health history, conduct physical examinations, order and interpret diagnostic studies (e.g., lab tests, cans, x-rays), make a differential diagnosis, prepare a case management plan, prescribe medications and treatments, collaborate with physicians and other health professionals, and counsel patients on health behaviors and treatment options.

Upon completion of the certificate program, graduates will be able to sit for the family nurse practitioner certification, which is a prerequisite for Virginia state licensure application. Certification is offered by the American Nurses Certification Center (ANCC) and the American Academy of Nurse Practitioners (AANP).

Target Audience

The target audience consists of licensed registered nurses with graduate degrees (masters or doctoral) who wish to gain new skills and knowledge for board certification to provide advanced primary care for individuals from prenatal and infancy through geriatrics.

Time to Complete

The certificate program is available to non-degree-seeking students who will follow a specific plan of study. Summer enrollment is required. It is anticipated that students who enroll can complete the program in 17 months (4 semesters). All certificate requirements must be completed within eight years of matriculation to the certificate program.

Admission

The admission requirements will apply to all students. All applicants to the proposed certificate program are required to meet the admission requirements of the VCU Graduate School.

Applicants must:

- Submit the VCU Graduate School online application and fee.

- Submit all official college transcripts from each college attended, including concurrent college enrollment transcripts.
- Be eligible for readmission or in good standing at the last college attended.
- Have an earned master's or doctoral degree in nursing from an accredited nursing school (e.g. ACEN, CCNE, CNEA)
- Have a current, unrestricted R.N. license from a U.S. state or territory at the time admissions application is submitted (Applicants without a R.N. license in the U.S. should consult with the Commission on Graduates of Foreign Nursing Schools and the Virginia Board of Nursing for the steps needed to obtain a Virginia R.N. license.)
- Submit three (3) academic and/or professional references.
- Write a personal statement.
- Submit a resume or curriculum vitae.
- Submit transcripts and/or syllabi for gap analysis to determine individual plan of study and semester of entry

Additional admission requirements:

- Students that have not completed three separate comprehensive graduate-level courses in: advanced pathophysiology, advanced health assessment, and advanced pharmacology will need to take them as a component of the post-professional certificate program in order to meet certification requirements.

For international students, the following is required:

- Submit an official transcript evaluation from a recognized foreign educational credentials evaluation service accredited by the National Association of Credential Evaluation Services (NACES) or the American Association of Collegiate Registrars and Admissions Officers (AACRAO).
- A Test of English as a Foreign Language (TOEFL) minimum composite score of 100 for the Internet Based Test (IBT) or 600 for the paper-based score; or an International English Language Testing System (IELTS) score minimum of 6.5 on the academic exam.
- A passing score on the VCU English Language Program Compression test.

Curriculum Requirements

The curriculum will provide a foundation in advanced practice primary care for patients across the lifespan. Core courses will emphasize the development of knowledge and skills in the provision of care to support health and wellness. Coursework will provide knowledge of nursing and medical management of commonly encountered acute and chronic illnesses for patients across the lifespan. Courses will educate students in health teaching, guidance, counseling of patients about illness and its prevention. The three practicum courses focus on the synthesis and application of didactic content in the clinical setting and developing and refining skills in eHealth assessment, determining differential diagnoses, and determining health management plans.

Program Requirements

Total number of credit hours: 21 credit hours

NURS 580. Primary Care of the Adult-Gerontology Population (4)
NURS 589. Maternal and Child Health in Primary Care (3)
NURS 590. Complex Problems in Family Primary Care (4)
NURS 595. Family Primary Care Practicum I (2)
NURS 642. Family Primary Care Practicum II (4)
NURS 658. Family Primary Care Practicum III (4)

Faculty

Faculty are assigned to teach in the modified certificate program by the Program Director working in collaboration with the Department Chair. Three full time faculty in the Department of Family and Community Health will teach courses in the certificate program. No additional or new fulltime faculty are required. Minimum requirements for faculty teaching in the certificate programs are:

- A masters or doctoral degree in nursing.
- Content expertise and clinical skills with the patient population and focus of the certificate program.
- Current licensure and national certification as a family nurse practitioner for faculty teaching in the practicum courses.

Adjunct faculty members will be used to teach in the certificate program. The department chair of the Department of Family and Community Health Nursing will hire adjunct faculty to teach didactic or practicum courses when salaried faculty are not available; and practicum courses based on a faculty to student ratio of one to seven. Adjunct faculty teaching in the certificate program will hold a master's or doctorate in nursing, current licensure and national certification.

Course Delivery Format

The certificate program will be conducted in a traditional face-to-face format and web-based formats. Both physical space and software to facilitate the synchronous and asynchronous online sessions are required and will be available. VCU possesses the resources, support, and technology necessary for quality online programs. Online programs are supported by VCU Technology Services, the Academic Learning Transformation Laboratory (ALT-Lab), and the Center for Teaching and Learning Excellence. The university's primary learning management system is Blackboard. Blackboard is centrally supported by VCU Technology Services which provides technical assistance, training, and system administration. Technology Services also supports a portfolio of academic technology for use online courses. Some examples include collaborative tool, VoiceThread, SafeAssign plagiarism detection tools, Respondus, and video capture solutions Kaltura and Echo360. Videoconferencing tools used in synchronous courses (Zoom and Blackboard Collaborate) are also supported by Technology Services.

All faculty assigned to teach in the certificate program are required to complete training offered by the VCU Academic Learning Transformation Lab and the VCU Center for Teaching and Learning Excellence. The University has adequate resources to deliver the modified certificate program.

Resources

Resources required to support the certificate program are met by existing resources to support current programs. These include student support services (e.g., enrollment, help desk, and library, computer and technology support, Blackboard Learning Management System, Zoom videoconferencing), faculty support services, and general administration (e.g., budgeting, forecasting, and enrollment management). Program administration is provided by a full time faculty member in the School of Nursing. No additional faculty positions are needed to support the modified program. VCU has sufficient resources to initiate and sustain the modified certificate program.

Gainful Employment

The proposed certificate is a gainful employment program. The certificate comes under Gainful Employment regulations.

Course Descriptions

NURS 580. Primary Care of the Adult-Gerontology Population. (4 credits)

This course provides content on the primary care management of adolescents through geriatrics. This course focuses on building a foundation of knowledge and clinical decision-making skills related to normal development, health promotion and disease prevention, and the diagnosis and management of common health conditions across the adult-life span. This course includes laboratory experiences.

NURS 589. Maternal and Child Health in Primary Care. (3 credits)

The course provides content on the management of the primary care health needs of pregnant women, and children from birth to adolescence. This course explores how family theory and health promotion of families provides the basis for both patient and family-centered approaches to providing evidence-based quality healthcare. This course includes laboratory experiences.

NURS 590. Complex Problems in Family Primary Care. (4 credits)

This course builds upon knowledge and skills from prior courses and clinical practicum experiences. The course provides content on the management of complex health issues across the lifespan. Students will increase knowledge and decision-making skills in the primary care treatment of vulnerable populations, patients with multiple comorbidities, and selecting appropriate pharmacotherapeutics. This course includes laboratory experiences.

NURS 595. Family Primary Care Practicum I. (2 credits)

This course provides opportunities for students to develop beginning competencies as a family nurse practitioner through precepted practicum experiences. Advanced health assessment skills and knowledge of management of common health problems are applied in the clinical setting to improve critical thinking and diagnostic reasoning.

NURS 642. Family Primary Care Practicum II. (4 credits)

The course provides opportunities for students to expand on their competencies as a family nurse practitioner through precepted practicum experiences. Critical thinking and diagnostic reasoning are applied in the management of common and complex health conditions across the lifespan. Students will develop, implement, and evaluate treatment plans. Students will provide high

quality, safe, collaborative, and ethical care. Performance of clinical skills at an intermediate level is expected.

NURS 658. Family Primary Care Practicum III. (4 credits)

This practicum course is the culminating experience for the family nurse practitioner student and focuses on skill refinement with increasing responsibility in the delivery of primary care to families. Students work with clinical preceptors to assimilate advanced clinical decision making and knowledge of the health system. Primary care skills including prioritization, treatment and coordination of both routine and complex episodic and chronic illnesses. Interdisciplinary collaborative practice skills are emphasized. Technology utilization is refined.

**Virginia Commonwealth University
Post-Professional Certificate**

Program Name

Psychiatric Mental Health Nurse Practitioner

CIP Code

51.3810

Initiation Date

Fall 2021

Description of Certificate

The Psychiatric Mental Health Nurse Practitioner (PMHNP) certificate is designed to provide registered nurses (RN's) with new skills and knowledge to care for individuals across the lifespan with common acute and chronic mental health illnesses. The program will educate students in the concepts of the maintenance of mental health across the lifespan. Students will develop knowledge in the diagnosis and management of mental health illnesses. Students will learn to provide advanced nursing care to patients from infancy to geriatrics. Graduates will be prepared to obtain a health history, conduct physical examinations, order and interpret diagnostic studies (e.g., lab tests), make differential diagnoses, prepare a case management plan, prescribe medications and treatments, provide psychotherapy, collaborate with physicians and other health professionals, and counsel patients on health behaviors and treatment options.

Upon completion of the certificate program, graduates will be able to sit for the psychiatric mental health nurse practitioner certification, which is a prerequisite for Virginia state licensure application. Certification is offered by the American Nurses Certification Center (ANCC).

Target Audience

The target audience consists of licensed registered nurses who wish to gain new skills and knowledge for board certification to provide advanced psychiatric mental health care for individuals from infancy through geriatrics.

Time to Complete

The certificate program is available to non-degree-seeking students who will follow a specific plan of study. Summer enrollment is required. It is anticipated that students who enroll can complete the program in 17 months (4 semesters). All certificate requirements must be completed within eight years of matriculation to the certificate program.

Admission

The admission requirements will apply to all students. All applicants to the proposed certificate program are required to meet the admission requirements of the VCU Graduate School.

Applicants must:

- Submit the VCU Graduate School online application and fee.

- Submit all official college transcripts from each college attended, including concurrent college enrollment transcripts.
- Be eligible for readmission or in good standing at the last college attended.
- Have an earned master's or doctoral degree in nursing from an accredited nursing school (e.g. ACEN, CCNE, CNEA)
- Have a current, unrestricted R.N. license from a U.S. state or territory at the time admissions application is submitted (Applicants without a R.N. license in the U.S. should consult with the Commission on Graduates of Foreign Nursing Schools and the Virginia Board of Nursing for the steps needed to obtain a Virginia R.N. license.)
- Submit three (3) academic and/or professional references.
- Write a personal statement.
- Submit a resume or curriculum vitae.
- Submit transcripts and/or syllabi for gap analysis to determine individual plan of study and semester of entry

Additional admission requirements:

- Students that have not completed three separate comprehensive graduate-level courses in: advanced pathophysiology, advanced health assessment, and advanced pharmacology will need to take them as a component of the post-professional certificate program in order to meet certification requirements.

For international students, the following is required:

- Submit an official transcript evaluation from a recognized foreign educational credentials evaluation service accredited by the National Association of Credential Evaluation Services (NACES) or the American Association of Collegiate Registrars and Admissions Officers (AACRAO).
- A Test of English as a Foreign Language (TOEFL) minimum composite score of 100 for the Internet Based Test (IBT) or 600 for the paper-based score; or an International English Language Testing System (IELTS) score minimum of 6.5 on the academic exam.
- A passing score on the VCU English Language Program Compression test.

Curriculum Requirements

The curriculum will provide a foundation in advanced practice psychiatric mental and behavioral health care for patients across the lifespan. Core course will emphasize the development of knowledge and skills in the identification of acute mental health illnesses. Coursework will provide knowledge of nursing and medical management of commonly encountered acute and chronic mental health illnesses for patients across the lifespan. Courses will educate students in health teaching, guidance, counseling of patients about mental illness and its prevention. The three practicum courses focus on the synthesis and application of didactic content in the clinical setting and developing and refining skills in health assessment, determining differential diagnoses, and determining health management plans.

Program Requirements

Total number of credit hours: 21 credit hours

NURS 521. Psychiatric Disorders Across the Lifespan (4)
NURS 522. Psychopharmacology for Advanced Practice (3)
NURS 598. Managing Psychiatric Disorders in Special and Vulnerable Populations (2)
NURS 602. Psychotherapy: Theory and Practice (2)
NURS 597. Psychiatric Mental Health Practicum I (2)
NURS 641. Psychiatric Mental Health Practicum II (4)
NURS 659. Psychiatric Mental Health Practicum III (4)

Faculty

Faculty are assigned to teach in the certificate program by the Program Director working in collaboration with the Chair of the Department of Adult Health and Nursing Systems Department Chair. Two full time faculty in the Department of Adult Health and Nursing System will teach courses in the certificate program. No additional or new fulltime faculty are required. Minimum requirements for faculty teaching in the certificate programs are:

- A masters or doctoral degree in nursing.
- Content expertise and clinical skills with the patient population and focus of the certificate program.
- Current licensure and national certification as a family nurse practitioner for faculty teaching in the practicum courses.

Adjunct faculty members will be used to teach in the certificate program. The department chair of the Department of Adult Health and Nursing Systems will hire adjunct faculty to teach didactic or practicum courses when salaried faculty are not available; and practicum courses based on a faculty to student ratio of one to seven. Adjunct faculty teaching in the certificate program will hold a master's or doctorate in nursing, current licensure and national certification.

Course Delivery Format

The certificate program will be conducted in a traditional face-to-face format and web-based formats. Both physical space and software to facilitate the synchronous and asynchronous online sessions are required and will be available. VCU possesses the resources, support, and technology necessary for quality online programs. Online programs are supported by VCU Technology Services, the Academic Learning Transformation Laboratory (ALT-Lab), and the Center for Teaching and Learning Excellence. The university's primary learning management system is Blackboard. Blackboard is centrally supported by VCU Technology Services which provides technical assistance, training, and system administration. Technology Services also supports a portfolio of academic technology for use online courses. Some examples include collaborative tool, VoiceThread, SafeAssign plagiarism detection tools, Respondus, and video capture solutions Kaltura and Echo360. Videoconferencing tools used in synchronous courses (Zoom and Blackboard Collaborate) are also supported by Technology Services.

All faculty assigned to teach in the certificate program are required to complete training offered by the VCU Academic Learning Transformation Lab and the VCU Center for Teaching and Learning Excellence. The University has adequate resources to deliver the modified certificate program.

Resources

Resources required to support the certificate program are met by existing resources to support current programs. These include student support services (e.g., enrollment, help desk, and library, computer and technology support, Blackboard Learning Management System, Zoom videoconferencing), faculty support services, and general administration (e.g., budgeting, forecasting, and enrollment management). Program administration is provided by a full time faculty member in the School of Nursing. No additional faculty positions are needed to support the modified program. VCU has sufficient resources to initiate and sustain the modified certificate program.

Gainful Employment

The proposed certificate is a gainful employment program. The certificate comes under Gainful Employment regulations.

Course Descriptions

NURS 521. Psychiatric Disorders Across the Lifespan. (4 credits)

This course explores the role and scope of the advanced practice psychiatric mental health nurse, the psychiatric diagnostic reasoning process, psychiatric case formulation, and treatment planning. This course includes laboratory experiences.

NURS 522. Psychopharmacology for Advanced Practice. (3 credits)

This course examines the psychopharmacological treatment of psychiatric disorders. The course will cover pharmacodynamics and pharmacokinetics of psychotropic medications in detail and will explore major psychopharmacological drug classes and specific medications, indications, dosing, and side effects. Students will be exposed to content related to the interaction between prescription medications and nonprescription substances. This course includes laboratory experiences.

NURS 598. Managing Psychiatric Disorders in Special and Vulnerable Populations. (2 credits)

This course deepens students' knowledge of the diagnosis and treatment of psychiatric disorders in special and vulnerable patient populations, such as children and adolescents, older adults, individuals with chronic illness, substance use disorders, personality disorders, individuals within the criminal justice system, refugees, LGBT+ populations, and military populations. Students will be challenged to confront their own biases and values as related to psychiatric practice.

NURS 602. Psychotherapy: Theory and Practice. (2 credits)

This course addresses the theoretical foundations and application of psychotherapy in advanced practice psychiatric mental health nursing. The course will explore major psychotherapy approaches. Students will apply principles of reflective practice relevant to their future practice as psychiatric mental health nurse practitioners. This course includes laboratory experiences.

NURS 597. Psychiatric Mental Health Practicum I. (2 credits)

This course focuses on the diagnosis and management of individuals with psychiatric disorders across the lifespan through faculty-supervised clinical experiences with a preceptor. The course provides opportunities to perform comprehensive psychiatric evaluations and ongoing psychiatric care.

NURS 641. Psychiatric Mental Health Practicum II. (4 credits)

This course provides opportunities for students to expand on their competencies as a psychiatric mental health nurse practitioner student through faculty supervised practicum experiences with a preceptor. Students will provide high quality, safe, collaborative, and ethical care.

NURS 659. Psychiatric Mental Health Practicum III. (4 credits)

This practicum course is the culminating experience for the psychiatric mental health nurse practitioner student and focuses on skill refinement with increasing responsibility in the delivery of psychiatric care across the lifespan through precepted practicum experiences.

Table of Contents

Description of Proposed Modified Background	1
Modification Background	1
Modified Degree Program.....	2
Curriculum	3
Student Assessment.....	5
Employment Skills/Workplace Competencies.....	9
Justification for Proposed Modified Degree Program	9
Rationale for the Program	9
Student Demand	10
Duplication	11
Projected Resources for the Proposed Modified Program.....	12
Resource Needs	12
Appendices.....	16
Appendix A: Sample Plans of Study.....	A-1
Appendix B: Course Descriptions.....	B-1
Appendix C: List of SCHEV Peer Programs	C-1

Description of Proposed Modified Background

Modification Background

Virginia Commonwealth University (VCU) requests approval to modify the Master of Science (M.S.) degree program in Human Genetics. The proposed modified program will reside in the School of Medicine, Department of Human and Molecular Genetics. The target start date is fall 2021. The program will be delivered in the traditional face-to-face format.

Virginia Commonwealth University seeks one modification to the M.S. in Human Genetics: a reduction in the total credit hours required for the degree from 59 credit hours to 36 credit hours. The reduction in credit hours will apply to the research requirement for the degree program.

The proposed modified program will bring the total number of credit hours for the M.S. in Human Genetics into alignment with State Council of Higher Education for Virginia (SCHEV) peer institutions. The credit hour reduction will also yield a tuition savings to both part-time and full-time students of at least \$3,502.

The purpose of the modified degree program is to provide advanced education for students interested in human genetics and prepare them with the skills they will need to perform research in this area. The focus of the program is to educate students on human inheritance, the basis for inheritance and the methods to study human genetic disease. Students will learn oral and written communication skills, how to form hypotheses, determine experimental methods to test hypotheses, perform experiments, be able to manipulate large datasets, analyze data using statistical analyses and form conclusions from their data. Graduates will be able to apply this knowledge for future investigations. Graduates will also be able to document, present, and communicate critical analysis findings to broad constituents from the public to legislators.

The proposed modifications to the program are from discussions among human and molecular genetics faculty members and administrators in the School of Medicine and the Department of Human and Molecular Genetics. The discussion was informed by comparative review of the curricula in similar or related degree programs at VCU SCHEV peer institutions. Standalone degree programs vary in total credit hours. Nationally, thesis-based master's degree programs commonly require from 24-34 credit hours. The required research requirement for similar or related master's degree programs at VCU SCHEV peer institutions is between 5 – 27 credit hours.

Modified Degree Program

The M.S. in Human Genetics is being modified in one way: a change in total degree program hours. The current M.S. in Human Genetics consists of 59 credit hours. VCU is proposing to reduce the credit hours in the program to 36. The proposed reduction to 36 credit hours is achieved by reducing the number of credit hours for required research in HGEN 697 from 27 to 8 as well as a reduction of credit hours for HGEN 610 from 3 to 1 credit hour and HGEN 690 from 4 to 2 credit hours.

Current & Proposed Curricula

M.S. in Human Genetics	M.S. in Human Genetics
Core Courses - 23 credits	Core Courses - 18 credits
HGEN 501 Introduction to Human Genetics (3)	HGEN 501 Introduction to Human Genetics (3)
HGEN 502 Advanced Human Genetics (3)	HGEN 502 Advanced Human Genetics (3)
HGEN 510 Classic Papers in Human Genetics (1)	HGEN 510 Classic Papers in Human Genetics (1)
HGEN 605 Experimental Methods in Human Genetics (5)	HGEN 605 Experimental Methods in Human Genetics (5)
HGEN 606 Introduction to Clinical Genetics (1)	
HGEN 610 Current Literature in Human Molecular Genetics (3)	HGEN 610 Current Literature in Human Molecular Genetics (1)
HGEN 611 Data Science I (3)	HGEN 611 Data Science I (3)
HGEN 690 Genetics Research Seminar (4)	HGEN 690 Genetics Research Seminar (2)
Other Required Courses - 4 credits	Other Required Courses - 5 credits
BIOS 543 Graduate Research Methods I or HGEN 651 Statistics for Genetic Studies I (3)	BIOS 543 Graduate Research Methods I or HGEN 651 Statistics for Genetic Studies I (3)
OVPR 601 Scientific Integrity or OVPR 602 Responsible Scientific Conduct or OVPR 603 Responsible Conduct of Research (1)	OVPR 601 Scientific Integrity or OVPR 602 Responsible Scientific Conduct or OVPR 603 Responsible Conduct of Research (1)
	HGEN 606 Introduction to Clinical Genetics (1)
Restricted Electives - 5 credits	Restricted Electives – 5 credits

PATH 670; courses at the 500 level or above in ANAT, BIOC, BIOL, BIOS, BNFO, HGEN, LFSC, MICR, NEUS, PHTX and PHIS excluding laboratory courses; courses specifically for professional programs (e.g. HGEN 600); directed research; independent study; seminar; current topic courses; MICR 608 and MICR 609	PATH 670; courses at the 500 level or above in ANAT, BIOC, BIOL, BIOS, BNFO, HGEN, LFSC, MICR, NEUS, PHTX and PHIS excluding laboratory courses; courses specifically for professional programs (e.g. HGEN 600); directed research; independent study; seminar; current topic courses; MICR 608 and MICR 609
Directed Research – 27 credits	Directed Research – 8 credits
HGEN 697 Directed Research (27)	HGEN 697 Directed Research (8)
Total: 59 credits	Total: 36 credits

Curriculum

The proposed M.S. degree program in Human Genetics will consist of 36 credit hours. A thesis will be required.

The focus of the curriculum is to educate students to address the ever-changing landscape of human genetics. The core curriculum will provide students with a foundation and understanding of human genetics, the scientific process and the ability to manipulate and analyze data. Students will learn principles of inheritance, the molecular basis of inheritance, methods to study genetics and its importance in clinical genetics. Students are expected to conduct an original research project culminating in the defense of their thesis. Students are expected to develop knowledge of their chosen area of inquiry and master research skills including forming hypotheses, executing experiments, analyzing data and forming conclusions. Students will develop skills in written and oral communication skills during their training.

Through the selection of other required courses, students will receive training in scientific integrity. More specifically, students will learn about contemporary issues relating to responsible conduct in research including academic integrity, mentoring, authorship and peer review, use of humans and animals in biomedical research, ownership of data, intellectual property, conflict of interest, scientific record keeping, collaborative research, research misconduct, and genetic technology. Students will be able to develop original research plans and conduct research.

Program Requirements

Core Courses – 18 credit hours

HGEN 501 Introduction to Human Genetics (3)
HGEN 502 Advanced Human Genetics (3)
HGEN 510 Classic Papers in Human Genetics (1)
HGEN 605 Experimental Methods in Human Genetics (5)
HGEN 610 Current Literature in Human Molecular Genetics (1)
HGEN 611 Data Science I (3)

HGEN 690 Genetics Research Seminar (2)

Other Required Courses – 5 credit hours

HGEN 606 Introduction to Clinical Genetics (1)

Students must select one of the following courses:

BIOS 543 Graduate Research Methods I (3)

HGEN 651 Statistics for Genetic Studies I (3)

Students must select one of the following courses:

OVPR 601 Scientific Integrity (1)

OVPR 602 Responsible Scientific Conduct (1)

OVPR 603 Responsible Conduct of Research (1)

Restricted Electives – 5 credit hours

Students must select two elective courses from the following:

PATH 670: Experimental Approaches to Tumor Biology (3)

Courses at the 500 level or above in ANAT, BIOC, BIOL, BIOS, BNFO, HGEN, LFSC, MICR, NEUS, PHTX and PHIS excluding laboratory courses; courses specifically for professional programs (e.g. HGEN 600); directed research; independent study; seminar; current topic courses; MICR 608 and MICR 609.

Research Requirement – 8 credit hours

HGEN 697 Directed Research (8)

Total credit hours: 36

Thesis Defense

Students are required to perform original research studies. Upon completing the thesis research requirement, students must report their results in a thesis that is prepared in an acceptable form and style as detailed in the Graduate Bulletin. On approval of the thesis by their adviser, the student submits a copy to each member of his/her advisory committee. The thesis is then examined by the student's advisory committee members, who decide upon its acceptability. The thesis committee is comprised of at least 3 members, all from the School of Graduate Studies. Two of the members must hold primary appointments in the Department of Human and Molecular Genetics at a level of Assistant Professor or greater, and one from outside the department.

A final oral examination is scheduled after the student's thesis has been approved by the student's advisory committee. This examination includes the subject matter of course work the student has completed as well as the thesis. It is administered by the student's Graduate Advisory Committee who will vote on the student's performance in addition to rating them with regard to mastery of the subject matter, their use of appropriate grammar, vocabulary and study and their ability to identify and articulate the thesis problem, discuss background/existing information,

present, assess and analyze supporting evidence, synthesize information creatively; address questions appropriately, communicate and answer questions effectively following the rubric adopted by the School. A representative of the Dean's Office serves as the chair of the examination committee and will cast a vote and rate student performance. A favorable vote, with no more than one negative vote and no more than one rating of unsatisfactory, is required for the candidate to pass the examination. Although the final examination is open to all faculty, only members of the student's advisory committee and the representative of the Dean's Office shall vote. No examiner shall abstain from voting.

See Appendix A for sample plans of study.

See Appendix B for course descriptions.

Student Learning Assessment

Students who complete the proposed M.S. in Human Genetics will possess knowledge in the area of human genetics, gain skills in performing research and have expertise in their specific field of study. Assessment methods involve both direct and indirect assessment tools. Assessment methods involve both direct and indirect assessment tools. Students will be assessed in each course through various mechanisms that include: class exercises, individual and/or group projects, papers, presentations, and examinations. Students will also be assessed bi-annually through evaluation of the faculty. During the first 2 semesters, these evaluations will be based upon performance in coursework, as well as input from the student's laboratory rotation director. After the student has identified a mentor, the evaluation will primarily be based on the student's progress as determined by the student's adviser.

Faculty who serve as advisers to students will be required to prepare written reports on the progress of each of their students for discussion at bi-annual faculty meetings. The adviser will prepare a report on their advisee's performance and rate the student in the areas of oral communication, written communication, experimental design, problem-solving skills and integrated knowledge of human and molecular genetics following the scoring rubric adopted by the School of Medicine. The purpose of these evaluations is to provide regular feedback to students regarding their progress and to develop plans to ensure a timely completion of the requirements of the degree program.

Learning Outcomes

The following are the learning outcomes for the proposed modified program. Students will be able to:

- Explain basic genetic principles and their biological basis
- Assess the inheritance pattern of a disease or phenotype, using pedigree data, and calculate recurrence risk
- Explain how different DNA variants and structural changes can affect the phenotype of an organism
- Explain the methods used in genetic analyses and what each method can reveal
- Clean and format large data sets for further analyses

- Apply the appropriate statistical test in the analysis of data
- Apply the principles of reproducibility of research such as the use of version control, access to computer code, transparency of analyses and data availability
- Read and comprehend a primary journal article and be able to list the strengths and weaknesses of the research.
- Practice the highest ethical principles with the responsible conduct in genetics research
- Speak and present clearly to professional and lay audiences with respect to use of vocabulary and logical progression including the use of figures and tables to effectively present a research project, proposal, or findings and implications
- Write clearly with respect to grammar, syntax, spelling, use of vocabulary and logical progression including the use of figures, tables and citations to effectively present a research project or proposal.
- Form a testable hypothesis, demonstrate the ability to design and develop experiments to test the hypothesis, collect and analyze data and form conclusions from the analysis

Curriculum map for M.S. in Human Genetics

Learning Outcomes	Core and Required Courses	Assessment Methods
<p>Explain basic genetic principles and their biological basis</p> <p>Assess the inheritance pattern of a disease or phenotype, using pedigree data, and calculate recurrence risk</p> <p>Explain how different DNA variants and structural changes can affect the phenotype of an organism</p> <p>Explain the methods used in genetic analyses and what each method can reveal</p>	<p>HGEN 501 Introduction to Human Genetics</p> <p>HGEN 502 Advanced Human Genetics</p> <p>HGEN 510 Classic Papers in Human Genetics</p> <p>HGEN 605 Experimental Methods in Human Genetics</p> <p>HGEN 610 Current Literature in Human and Molecular Genetics</p> <p>HGEN 606 Introduction to Clinical Genetics</p> <p>HGEN 690 Genetics Research Seminar</p>	<p><u>Formative:</u> class participation; group discussions; oral presentations, reading journal articles, listening to research seminars, performing research</p> <p><u>Summative:</u> Quizzes, midterm and final exams, faculty evaluation, thesis defense</p>

	HGEN 697 Directed Research in Genetics	
Clean and format large data sets for further analyses Apply the principles of reproducibility of research such as the use of version control, access to computer code, transparency of analyses and data availability	HGEN 511 Data Science I HGEN 697 Directed Research in Genetics	<u>Formative:</u> class participation; group discussions, homework assignments, performing research <u>Summative:</u> Quizzes, midterm and final exams, faculty evaluation, thesis defense
Apply the appropriate statistical test in the analysis of data	BIOS 543 Graduate Research Methods I or HGEN 651 Statistics for Genetic Studies HGEN 511 Data Science I HGEN 697 Directed Research in Genetics	<u>Formative:</u> class participation; group discussions, homework assignments, performing research <u>Summative:</u> Quizzes, midterm and final exams, faculty evaluation, thesis defense
Read and comprehend a primary journal article and be able to list the strengths and weaknesses of the research.	HGEN 510 Classic Papers in Human Genetics HGEN 610 Current Literature in Human Molecular Genetics HGEN 697 Directed Research in Genetics	<u>Formative:</u> class participation; group discussions, performing research <u>Summative:</u> faculty evaluation, thesis defense
Practice the highest ethical principles with the responsible conduct in genetics research	OVPR 601 Scientific Integrity or OVPR 602 Responsible Scientific Conduct or OVPR 603 Responsible Conduct of Research HGEN 697 Directed Research in Genetics	<u>Formative:</u> class participation; group discussions, performing research <u>Summative:</u> faculty evaluation, thesis defense
Speak and present clearly to professional and lay audiences with respect to use of vocabulary and	HGEN 502 Advanced Human Genetics	<u>Formative:</u> oral presentations; group discussions

logical progression including the use of figures and tables to effectively present a research project, proposal, or findings and implications	HGEN 510 Classic Papers in Human Genetics HGEN 610 Current Literature in Human and Molecular Genetics HGEN 606 Introduction to Clinical Genetics HGEN 690 Genetics Research Seminar	<u>Summative:</u> Faculty evaluations, thesis defense
Write clearly with respect to grammar, syntax, spelling, use of vocabulary and logical progression including the use of figures, tables and citations to effectively present a research project or proposal	HGEN 502 Advanced Human Genetics HGEN 606 Introduction to Clinical Genetics	<u>Formative:</u> written assignments; thesis <u>Summative:</u> midterm and final exams; faculty assessment, evaluation of thesis
Form a testable hypothesis, demonstrate the ability to design and develop experiments to test the hypothesis, collect and analyze data and form conclusions from the analysis	BIOS 543 or HGEN 651 Research Methods or Statistics HGEN 502 Advanced Human Genetics HGEN 605 Experimental Methods in Human Genetics HGEN 610 Current Literature in Human and Molecular Genetics HGEN 611 Data Science I HGEN 690 Genetics Research Seminar HGEN 697 Directed Research	<u>Formative:</u> Solving problem sets, homework assignments, class discussions; reading journal articles, performing research; research presentations <u>Summative:</u> Quizzes, midterm and final exams, faculty evaluations, thesis defense

Employment Skills

Graduates of the proposed modified M.S. degree program in Human Genetics will be able to:

- Apply knowledge of inheritance patterns to calculate recurrence risks for Mendelian disorders in the investigation of human disease or in a diagnostic setting
- Identify DNA variants and large structural changes and their relationships to disease in the investigation of human disease or in a diagnostic setting
- Write and edit scientific publications
- Teach basic concepts of genetics
- Write research grant proposals and apply for funding from government agencies and private funding sources
- Prepare and analyze medical samples and data to investigate causes and treatment of genetic diseases
- Design and conduct studies that investigate both human diseases and methods to prevent and treat them

Justification for Proposed Modified Degree Program

Rationale for the Program

There are two factors to justify the need for the proposed modified degree program: 1) a reduction in credit hours will align the degree program with similar or related thesis-based master's programs within Virginia and at SCHEV peer institutions; and 2) the reduction in credit hours will result in a cost savings to students.

Alignment Peer Programs

The M.S. in Human Genetics program at VCU is not a common program. Within the Commonwealth of Virginia, we found one related master's degree program in Biology at the University of Virginia. The program requires 30 credit hours and a thesis. There are seven similar or related master's degree programs at VCU SCHEV peer institutions: Drexel University, Indiana University, State University of New York at Buffalo, Temple University, University of Arizona, University of Louisville, and Wayne State University. These programs require 30-63.5 credits for the degree. The research requirement for the thesis-based programs at the aforementioned SCHEV peer institutions ranges from 5 credit hours to 27 credit hours.

The proposed modified degree program of 36 credits would align with peer institution programs. In reducing the credit hours, VCU's program will be competitive with similar degree programs at peer institutions while not compromising the quality of the program or the rigor of the program.

Alignment Commonwealth Programs

There are no other degree programs in human genetics at public institutions in Virginia, however, similar degree programs in Biology were assessed. Of the six additional master's degree programs in biology listed below, all have a 30 or 31 credit hour requirement. Of those,

all have a thesis requirement or thesis option. At Virginia State the non-thesis option requires an additional 6 credit hours of course work. The VCU proposed modified degree program at 36 credit hours would also culminate with a thesis. In reducing the credit hours, VCU's program will be in alignment with biology degree program in the Commonwealth that culminates in thesis.

The proposed modified degree program of 36 credits would align with comparable programs at VCU SCHEV peer institutions. By reducing the credit hours, VCU's program will be more competitive with similar degree programs without compromising the quality or rigor of the degree program.

Tuition Cost Savings for Students

The reduction in credit hours for the proposed modified MS in Human Genetics translates into an overall tuition savings for part-time and full-time students. The 2020-2021 tuition rates approved by the VCU Board of Visitors for on campus courses were used for the calculations. Part-time students at 1 – 8 credit hours will save \$18,403 (in-state students) or \$36,156 (out-of-state students) and full-time students at 9 – 15 credit hours will save \$1,983 (in-state) or \$3,600 (out-of-state). Current enrollment shows that 25% of the students are part-time. The reduction in cost will also make VCU's program competitive with degree programs in-state and out-of-state. These cost savings to the students in the proposed modified MS in Human Genetics would be achieved without sacrificing the quality or the rigor of the degree program.

See Appendix C for a list of program at VCU SCHEV peer institutions.

Student Demand

Student enrollment in the proposed modified M.S. degree program in Human Genetics is expected to remain about the same as student enrollment in the current M.S. degree program in Human Genetics. Faculty teaching in the existing degree program will remain the same for the proposed modified degree program. It is expected that student enrollment in the proposed modified degree program will remain at a level appropriate to faculty resources.

STATE COUNCIL OF HIGHER EDUCATION FOR VIRGINIA
SUMMARY OF PROJECTED ENROLLMENTS IN PROPOSED PROGRAM

Projected enrollment:

Year 1		Year 2		Year 3		Year 4 Target Year (2-year institutions)			Year 5 Target Year (4-year institutions)		
<u>2021 - 2022</u>		<u>2022 - 2023</u>		<u>2023 - 2024</u>		<u>2024 - 2025</u>			<u>2024 - 2025</u>		
HDCT <u>4</u>	FTES <u>6</u>	HDCT <u>6</u>	FTES <u>8</u>	HDCT <u>8</u>	FTES <u>11</u>	HDCT <u>10</u>	FTES <u>14</u>	GRAD <u>6</u>	HDCT <u>10</u>	FTES <u>14</u>	GRAD <u>9</u>

Assumptions:

95% Retention

75% Full-time students / 25% Part-time students

Full-time students: 9 credit hours per semester

Part-time students: 6 credit hours per semester

Full-time students graduate in 2 years

Part-time students graduate in 3 years

Duplication

No public universities in Virginia offer a similar degree program to the proposed modified M.S. in Human Genetics. Master of Science degree programs in Biology are related programs, which a number of public institutions in Virginia offer. The University of Virginia of Virginia offers an M.S. in Biology with a concentration in molecular genetics.

University of Virginia (UVA)

UVA offers an MS in Biology with a concentration in molecular genetics that requires students to complete 30 credit hours. Students are expected to complete a minimum of 24 credits of graded coursework including three introductory courses in research methods and ethics, four lecture or lab courses, two courses in topical research and one colloquium or journal club. Students are required to write and defend a thesis based primarily on independent laboratory research. This program prepares students for advanced graduate study at the doctoral level or research-oriented positions.

Projected Resources for the Proposed Modified Program

Resource Needs

Virginia Commonwealth University and the School of Medicine has all of the faculty, classified support staff, equipment, library and other resources necessary to offer the proposed modified M.S. in Human Genetics. The following categories detail the resources required to operate the program for the first year of the modified program and through the target year. Assessments of the need for full-time faculty, part-time faculty, and adjunct faculty are based on the following ratio of student enrollment to faculty effort: 11 FTE of enrollment requires one FTE faculty for instruction.

Full-time Faculty

No faculty will deliver more than 50% teaching effort for the proposed modified program.

Part-time Faculty

Part-time faculty will not be needed to initiate and sustain the proposed modified program.

Adjunct Faculty

Adjunct faculty will not be needed to initiate and sustain the proposed modified program.

Graduate Assistants

No graduate assistantships will be needed to initiate and sustain the proposed modified program.

Classified Positions

No additional classified staff positions will be needed to initiate or sustain the proposed modified program. The current staff will be sufficient to support the proposed modified program.

Targeted Financial Aid

No targeted financial aid will be offered to initiate and sustain the proposed modified degree program.

Equipment, (including computers)

No new equipment is needed to initiate and sustain the proposed modified degree program. The equipment available, including computers, is sufficient for the proposed modified program. Computer and instructional equipment resources are provided by the School and the University.

Library

No new Library resources will be required to initiate and sustain the proposed modified program. The library has sufficient and appropriate journals, books, online journals to support the proposed modified degree program.

Telecommunications

No additional resources are needed to initiate or sustain the proposed modified program. Telecommunications equipment is provided by the School and the University.

Space

No new or additional space is required to initiate or sustain the proposed modified degree program. The program has adequate space for classrooms, meetings, and offices.

Special Tuition or Fee Charges

There are no special tuition or fee charges for the proposed modified degree program.

Other Resources (specify)

No other resources are needed to initiate and sustain the proposed modified degree program. No resources are needed for advertising and promotion of the proposed modified degree program.

Funds to Initiate and Operate the Degree Program

Figures provided in the table below will be compared to SCHEV funding estimates using the current base adequacy model. This comparison will serve as a reference for the estimated costs. If there are large discrepancies, SCHEV may request additional clarification to ensure the institution's assumptions are correct, or require modifications as a condition of approval.

Cost and Funding Sources to Initiate and Operate the Program			
Informational Category		Program Initiation Year 2021 - 2022	Program Full Enrollment Year¹ 2023 - 2024
1.	Projected Enrollment (Headcount)	4	8
2.	Projected Enrollment (FTE)	6	11
3.	Estimated Tuition and E&G Fees for Students in the Proposed Program	\$21,585	\$22,000_
4.	Projected Revenue from Tuition and E&G Fees Due to the Proposed Program	\$129,510	\$242,000
5.	Other Funding Sources Dedicated to the Proposed Program (e.g., grant, business entity, private sources)		

¹ For the "Full Enrollment Year" use: for associate degrees, initiation year plus 1; for baccalaureate degrees, initiation plus 3; for masters degrees, initiation plus 2; for doctoral degrees, initiation plus 3.

Part V: Certification Statements

1. A request of any kind will be submitted to the General Assembly for funds to initiate and/or maintain the proposed degree program.

Yes ☐
No ☒

If “Yes” is checked, include narrative text to describe: when the request will be made, how much will be requested, what the funds will be used for, and what will be done if the request is not fulfilled.

2. The proposed degree program is included in the institution’s most recent six-year plan.

Yes ☒
No ☐

If “No” is checked, include narrative text to explain why the program is being advanced at the present time despite not being included in the six-year plan.

3. The institution’s governing board has been provided information regarding duplication (if applicable) and labor market projections as part of its approval action.

Yes ☒
No ☐

If “No” is checked, include narrative text to explain why the governing board has not been provided the information.

The institution’s Chief Academic Officer attests to the accuracy of the above statements

Gail Hackett, Ph.D.

Name (Printed)

Appendices

Appendix A: Sample Plans of Study

Full-Time Students

Year	Fall Semester	Spring Semester
Year 1	BIOS 543/HGEN 651 Graduate Research Methods or Statistics (3)	HGEN 502 Advanced Human Genetics(3)
	HGEN 501 Introduction to Human Genetics (3)	HGEN 605 Experimental Methods in Human Genetics(3)
	HGEN 510 Classic Papers in Human Genetics (1)	HGEN 606 Introduction to Clinical Genetics (1)
	HGEN 605 Experimental Methods in Human Genetics (2)	HGEN 690 Genetics Research Seminar (1)
		Elective #1 (3)
Year 2	HGEN 610 Current Topics in Molecular Genetics (1)	HGEN 690 Genetics Research Seminar (1)
	HGEN 697 Directed Research (4)	HGEN 697 Directed Research (4)
	HGEN 611 Data Science I (3)	Elective #2 (2)
	OVPR 601, 602 or 603 Scientific Integrity (1)	

Total credit hours: 36

Full-Time

First Year - Fall Semester – 9 credits

First Year - Spring Semester – 11 credits

Subtotal - 20 credits

Second Year - Fall Semester – 9 credits

Second Year - Spring Semester – 7 credits

Subtotal – 12 credits

Total Credit Hours 36

Part-Time Students

Year	Fall Semester	Spring Semester
Year 1	HGEN 501 Introduction to Human Genetics (3)	HGEN 502 Advanced Human Genetics(3)
	HGEN 510 Classic Papers in Human Genetics (1)	HGEN 605 Experimental Methods in Human Genetics (3)
	HGEN 605 Experimental Methods in Human Genetics (2)	
Year 2	BIOS 543 or HGEN 651 Graduate Research Methods or Statistics (3)	HGEN 606 Introduction to Clinical Genetics (1)
	HGEN 611 Data Science I (3)	HGEN 690 Genetics Research Seminar (1)
		Elective #1 (3)
Year 3 9 credits	HGEN 610 Current Topics in Molecular Genetics (1)	HGEN 690 Genetics Research Seminar (1)
	HGEN 697 Directed Research (4)	HGEN 697 Directed Research (4)
	OVPR 601, 602 or 603 Scientific Integrity (1)	Elective #2 (2)

Total Credit Hours 36

Full-Time

First Year - Fall Semester – 6 credits

First Year - Spring Semester – 6 credits

Subtotal - 12 credits

Second Year - Fall Semester – 6 credits

Second Year - Spring Semester –5 credits

Subtotal – 11 credits

Third Year - Fall Semester – 6 credits

Third Year - Spring Semester –7 credits

Subtotal – 9 credits

Total credit hours: 36

Appendix B: Course Descriptions

Core Courses

HGEN 501. Introduction to Human Genetics. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Enrollment by undergraduate students requires permission of instructor. Basic knowledge of genetics is recommended. Provides a comprehensive examination of the fundamentals of human genetics. Explores topics including Mendelian and non-Mendelian inheritance, pedigree analysis, cytogenetics, aneuploid syndromes, cancer, gene structure and function, epigenetics, gene expression, biochemical genetics, and inborn errors of metabolism.

HGEN 502. Advanced Human Genetics. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisite: HGEN 501 or equivalent. Enrollment restricted to graduate students. A comprehensive study of the principles of specific areas in human genetics. Explores topics including quantitative genetics, genetic epidemiology, gene mapping, animal models, the characterization of complex disease, diagnostic testing and genetic counseling.

HGEN 510. Classic Papers in Human Genetics. 1 Hour.

Semester course; 1 lecture hour. 1 credit. Enrollment restricted to graduate students in the School of Medicine. This course surveys the seminal discoveries in the discipline of human genetics and introduces students to reading, understanding, discussing, critiquing and presenting original journal articles.

HGEN 605. Experimental Methods in Human Genetics. 1-3 Hours.

Semester course; 2-6 laboratory hours. 1-3 credits. Restricted to students in the M.S. or Ph.D. programs in human genetics. Provides hands-on experience with the experimental methods that are used to carry out research in specific areas of human genetics prior to beginning thesis/dissertation research. Graded S/U/F.

HGEN 606. Introduction to Clinical Genetics. 1 Hour.

Semester course; 1 lecture hour. 1 credit. Prerequisite: open only to graduate students in human genetics programs or by permission of instructor. Provides an overview of medical genetics and counseling practice for non-genetic counseling students, including orientation to the translational side of research genetics and contemporary practice of clinical genetics. Graded S/U/F.

HGEN 610. Current Literature in Human Molecular Genetics. 1 Hour.

Semester course; 1 lecture hour. 1 credit. Prerequisite: open only to graduate students. Provides directed experience in critiquing, understanding and presenting current literature on a focused topic in molecular genetics. Graded as S/U/F.

HGEN 611. Data Science I. 3 Hours.

Semester course; 3 lecture hours. 3 credits. This course will introduce students to tools and techniques from the discipline of data science that support efficient and reproducible scientific computing. Students will gain hands-on experience developing complete data analysis projects based on real-world datasets. Lessons will cover the primary tasks that comprise most analyses: data management/acquisition, cleaning, reshaping, manipulation, analysis and visualization, as well as strategies for arranging these constituent parts into cohesive workflows that are verifiable, easily

repeatable and consistent with best practices for reproducible computational research. This course will focus on the statistical programming language R but no programming background is necessary.

HGEN 690. Genetics Research Seminar. 1 Hour.

Semester course; 1 lecture hour. 1 credit. Selected topics in genetics presented by students and staff.

Other Required Courses

BIOS543. Graduate Research Methods I. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Enrollment is restricted to students with graduate standing, or one course in statistics and permission of instructor. This course is intended for graduate students and researchers without formal training in the statistical and biostatistical sciences. Students enrolled in this course will study various aspects of the research process, from creating the research question to publication. Particularly, students will learn sampling theory, the roles of probability, chance and variability in measurement and decision-making, study design characteristics and validity, basic data management, visualization and summarization, simple techniques for analyzing categorical data (e.g., chi-square test, exact tests), common techniques for analyzing continuous data (t-tests, analysis of variance, correlation and simple linear regression), and statistical decision-making. These topics will be covered through a variety of approaches, including traditional lecture, group discussion and in-class activities, and students will be assessed on their ability to understand statistical considerations in the study design process, appropriately perform simple statistical procedures and report statistical findings using the IMRaD format. The appropriate use of data management and statistical procedures will be modeled using several commonly used software packages. Students may receive degree credit for only one of BIOS 543, STAT 441, STAT 541, STAT 543 or STAT 641. BIOS 543 is not applicable toward the M.S. degree in mathematical sciences or the M.S. degree in computer science.

HGEN 651. Statistics for Genetic Studies I. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Teaches students statistical methods for multidisciplinary research, specifically presenting the mathematical components that underlie statistical analysis and including probability theory, statistical distributions, inference and linear models.

OVPR 601. Scientific Integrity. 1 Hour.

Semester course; 1 lecture hour. 1 credit. A survey of contemporary issues relating to responsible conduct in research. Topics include academic integrity, mentoring, authorship and peer review, use of humans and animals in biomedical research, ownership of data, intellectual property, conflict of interest, scientific record keeping, collaborative research, research misconduct, and genetic technology. Graded as pass/fail.

OVPR 602. Responsible Scientific Conduct. 1 Hour.

Semester course; 1 lecture hour. 1 credit. Priority registration to postdoctoral trainees and graduate students; others by permission of instructor. A survey of contemporary issues relating to responsible conduct in research. Topics include research integrity, mentoring, authorship and peer review, use of humans and animals in biomedical research, ownership of data, intellectual property,

conflict of interest, scientific record keeping, collaborative research, research misconduct, and genetic technology. Graded pass/fail.

OVPR 603. Responsible Conduct of Research. 1 Hour.

Short course; 1 lecture hour. 1 credit. Restricted to graduate or professional students, with preference given to Preparing Future Faculty students. Registration requires permission of PFF Program office. This course is designed to provide a learning experience that will enable students to develop and refine skills needed to solve problems involving relevant topic areas of responsible scientific conduct and to clearly articulate ethically and legally acceptable solutions to problems posed about scientific conduct. Content of the course includes relevant guidelines, policies and laws bearing on the conduct of scientific research including those dealing with scientific authorship, use of humans and animals in research, conflict of interest, data ownership, scientific record keeping, collaborative research, and ownership, protection and use of intellectual property in the arena of scientific research. Conventions and normative behavior related to responsibilities in the scientific mentor-trainee relationship will also be covered. Graded as pass/fail.

Restricted Electives

PATH 670; courses at the 500 level or above in ANAT, BIOC, BIOL, BIOS, BNFO, HGEN, LFSC, MICR, NEUS, PHTX and PHIS excluding laboratory courses; courses specifically for professional programs (e.g. HGEN 600); directed research; independent study; seminar; current topic courses; MICR 608 and MICR 609

HGEN 511. Human Cytogenetics. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisite: HGEN 501. A discussion of recent advances in human cytogenetics. Topics covered will include chromosome banding techniques and ultrastructure, meiosis, numerical and structural abnormalities, fragile sites, cancer cytogenetics, methodology for linkage studies, and population cytogenetics. Clinical cases are used to illustrate the application of special diagnostic methodologies.

HGEN 516. Population Genetics. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisite: STAT/BIOS 543. Theoretical and empirical analyses of how demographic and evolutionary processes influence neutral and adaptive genetic variation within populations.

HGEN 602. Genetic Models of Disease. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Understanding the molecular basis of human disease states is a major focus for biomedical research. This course will train students to investigate molecular-genetic mechanisms of disease using four genetic model organisms: the nematode *C. elegans*, the fruit fly *Drosophila melanogaster*, the teleost zebrafish *Danio rerio* and the mouse *Mus musculus*, which serve as important laboratory models for human diseases and facilitate the elucidation of the underlying molecular mechanisms.

HGEN 603. Mathematical and Statistical Genetics. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisites: BIOS 543 and BIOS 544; CCTR 702 and 703; or equivalents or permission from the course director. Provides an introduction to the rudiments of theoretical and applied mathematical population genetics including the segregation of

genes in families, genetic linkage and quantitative inheritance. Emphasizes the methods used in the analysis of genetic data.

HGEN 612. Data Science II. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisite: HGEN 611. This course builds upon the material introduced in the prerequisite and introduces advanced techniques for working with data and producing highly reproducible research. Students will expand their data science toolbox to include the Unix-based command-line environment and associated applications for manipulating data, automating workflows and recording incremental changes to research materials. Students will also dive deeper into R, learning more sophisticated programming methods for solving a wide variety of research-related challenges and placing more emphasis on programming technique -- writing code that is robust, expressive and modular --culminating in the development of their own R packages, which allows other scientists to benefit from this work.

HGEN 614. Pathogenesis of Human Genetic Disease. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Enrollment is restricted to graduate students. Surveys the mechanisms and varieties of human gene mutations resulting in human genetic disease and emphasizes different investigational disorders using current scientific literature.

HGEN 619. Quantitative Genetics. 3 Hours.

Semester course; 3 lecture hours. 3 credits. The effects of genes and environment on complex human traits with emphasis on: Genetic architecture and evolution; nongenetic inheritance; mate selection; developmental change; sex-effects; genotype-environment interaction; resolving cause from effect; design of genetic studies, statistical methods and computer algorithms for genetic data analysis.

HGEN 620. Principles of Human Behavioral Genetics. 3 Hours.

Semester course; 3 lecture hours. 3 credits. The theory of genetic and nongenetic transmission considered in relation to the design, analysis, and interpretation of studies to identify the principal genetic and environmental causes of behavioral variation. Included will be analysis of intelligence, personality, social attitudes, and psychiatric disorders.

HGEN 652. Statistics for Genetic Studies II. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisite: HGEN 651. Builds upon the quantitative statistical methods from prerequisite course. Students will learn the mathematical components that underlie statistical analysis with a focus on maximum-likelihood methods and structural equation modeling. These components provide the necessary foundation for the advanced statistical genetic methods for understanding how genetic and environmental factors impact the development of psychiatric and substance abuse disorders.

Appendix C: List of SCHEV Peer Programs

University	Program Name	Credit Hours Required	Thesis Research Credit Hours
Drexel University	M.S. in Molecular & Cell Biology & Genetics	63.5	27
Indiana University	M.S. in Medical and Molecular Genetics	30	7
State University of New York - Buffalo	M.S. in Genetics	30	6
Temple University	M.S. in Cancer Biology & Genetics	30	7
University of Arizona	M.S. in Cell and Molecular Medicine	30	5
University of Louisville	M.S. in Biochemistry and Molecular Genetics	30	6
Wayne State University	M.S. in Master of Molecular Genetics & Genomics	34	8

Table of Contents

Description of Proposed Modified Background	1
Modification Background	1
Modified Degree Program.....	2
Curriculum	2
Student Learning Assessment	4
Employment Skills/Workplace Competencies.....	8
Justification for Proposed Modified Degree Program	8
Rationale for the Program	8
Student Demand	9
Duplication	10
Projected Resources for the Proposed Modified Program.....	10
Resource Needs	10
Appendices.....	15
Appendix A: Sample Plans of Study	A-1
Appendix B: Course Descriptions	B-1
Appendix C: List of Programs at Public Institutions in Virginia.....	C-1
Appendix D: List of programs at VCU SCHEV Peer Institutions	D-1

Description of Proposed Modified Background

Modification Background

Virginia Commonwealth University (VCU) requests approval for a modification of the Master of Science (M.S.) in Anatomy and Neurobiology. The proposed modified program will reside in the School of Medicine, Department of Anatomy and Neurobiology. The target start date is fall 2021. The program will be delivered in the traditional face-to-face format.

Virginia Commonwealth University seeks one modification to the M.S. in Anatomy and Neurobiology: a reduction in the total credit hours required for the degree from 66 credit hours to 37 credit hours. The reduction in credit hours will apply to the research requirement for the degree program.

The proposed modified program will bring the total number of credit hours for the M.S. in Anatomy and Neurobiology into alignment with similar thesis-based MS programs in the School of Medicine at VCU, in Virginia, and with State Council of Higher Education for Virginia (SCHEV) peer institutions. The credit hour reduction will also will yield a tuition savings to part-time students of up to \$42,000.

The purpose of the modified degree program is to provide advanced education for students interested in teaching and research professions related to anatomy and neurobiology and enables our students to pursue further studies in the biomedical sciences including teaching, research, and healthcare. The focus of the program is to educate students on the theory, methods, and use of best practices in anatomy and neurobiology research and to provide them with critical thinking, analytical, writing and oral presentation skills. Graduates will be able to perform research in anatomy and neurobiology as well as related areas, function as part of small and large research teams, interpret published research findings in the area of anatomy and neurobiology, formulate testable hypotheses, develop research strategies, perform experiments in a laboratory or clinical setting, analyze and summarize experimental results, communicate their results in written and oral forms to specialists and non-specialists, teach anatomy at the advanced level.

The proposed modifications to the program are the product of a yearlong discussion among faculty members and administrators in the School of Medicine and the Department of Anatomy and Neurobiology. The discussion was informed by a comparative review of the curricula in similar degree programs at public institutions within the Commonwealth of Virginia and at SCHEV peer institutions. Standalone degree programs vary in total credit hours. The number of required credit hours students must earn for similar thesis-based master's degrees varies from 30 to 41 total credits within the School of Medicine at VCU and 30 to 42 credits within master's program at VCU programs outside of the School of Medicine. In Virginia, thesis-based master's program commonly require 30 to 31 credit hours. Nationally, it appears that degree programs more commonly require 30-38 credit hours. The required research requirement for similar or related master's degree programs at VCU SCHEV peer institutions is between 6 – 18 credit hours.

Modified Degree Program

The M.S. in Anatomy and Neurobiology is being modified in one way: a change in total degree program hours. The current M.S. in Anatomy and Neurobiology consists of 66 credit hours. VCU is proposing to reduce the credit hours in the program to 37. The proposed reduction to 37 credit hours will be achieved by reducing the required number of directed research credits in ANAT 697 from 42 credits to 13 credits. The reduction in credit hours is consistent with the research requirement at VCU SCHEV peer institutions.

Current & Proposed Curricula

M.S. in Anatomy and Neurobiology	M.S. in Anatomy and Neurobiology
Core Courses - 23 credits	Core Courses - 23 credits
ANAT 610 Systems Neuroscience (4)	ANAT 610 Systems Neuroscience (4)
ANAT 690 Anatomy and Neurobiology seminar (4)	ANAT 690 Anatomy and Neurobiology seminar (4)
BIOC 503 Biochemistry, Cell and Molecular Biology (5)	BIOC 503 Biochemistry, Cell and Molecular Biology (5)
BIOC 504 Biochemistry, Cell and Molecular Biology (5)	BIOC 504 Biochemistry, Cell and Molecular Biology (5)
IBMS 600 Laboratory Safety (1)	IBMS 600 Laboratory Safety (1)
NEUS 609 Cellular and Molecular Neuroscience (4)	NEUS 609 Cellular and Molecular Neuroscience (4)
Restricted Electives – 1 credit	Restricted Electives – 1 credit
OVPR 601 or OVPR 602 or OVPR 603 Scientific Integrity (1)	OVPR 601 or OVPR 602 or OVPR 603 Scientific Integrity (1)
Research Requirement – 42 credits	Research Requirement – 13 credits
ANAT 697 Directed Research (42)	ANAT 697 Directed Research (13)
Total: 66 credits	Total: 37 credits

Curriculum

The proposed M.S. degree program in Anatomy and Neurobiology will consist of 37 credit hours. A thesis will be required.

The focus of the modified degree program is to provide advanced education for students interested in (i) teaching and research professions related to anatomy and neurobiology, as well as technical careers in neurobiological research laboratories in academic, private and government institutions and (ii) to prepare students for further academic training leading to M.S., D.D.S. and Ph.D. degrees.

The core curriculum will provide students with a foundational understanding of anatomy and neurobiology, biochemistry and laboratory safety. Students will learn the principles of anatomy with a focus on neuroanatomy; structure of function of the central nervous system; fundamental aspects of biochemistry and cell biology; and basic laboratory safety procedures. Coursework will provide students with opportunities to train in both practical and theoretical aspects of neuroscience research at both cellular and systems levels. Through the core curriculum, students will become knowledgeable about research methods and evaluation of published findings in anatomy and neurobiology. Students will also learn to communicate in written formats and in oral presentations. Students will also conduct research to develop evidence-based knowledge and skills.

Through the selection of restricted electives, students will receive training in scientific integrity. More specifically, students will learn about contemporary issues relating to responsible conduct in research including academic integrity, mentoring, authorship and peer review, use of humans and animals in biomedical research, ownership of data, intellectual property, conflict of interest, scientific record keeping, collaborative research, research misconduct, and genetic technology. Students will be able to develop original research plans and conduct research.

Program Requirements

Core Courses - 23 credits

ANAT 610. Systems Neuroscience (4)
ANAT 690. Anatomy and Neurobiology seminar (4)
BIOC 503. Biochemistry, Cell and Molecular Biology (5)
BIOC 504. Biochemistry, Cell and Molecular Biology (5)
IBMS 600. Laboratory Safety (1)
NEUS 609. Cellular and Molecular Neuroscience (4)

Restricted Elective – 1 credit

OVPR 601. Scientific Integrity (1)
OVPR 602. Responsible Scientific Conduct (1)
OVPR 603. Responsible Scientific Conduct of Research (1)

Research Requirement – 13 credits

ANAT 697. Directed Research (13)

Total credit hours: 37

Thesis

At the appropriate time in their research, the student will prepare a thesis and schedule a Final Oral Defense of the thesis. The Final Oral Examination (defense of the thesis) will cover the subject of the candidate's dissertation and related basic science coursework. The thesis document will include an abstract, introduction, methods, results, discussion, and reference section. The introduction provides background, significance, and rationale for the scientific topic. The

methods section includes all procedures utilized. The results section will present the findings, including figures and graphs. The discussion section will present the significance of the findings and how they relate to other published work in the field.

See Appendix A for sample plan of study.

See Appendix B for course descriptions.

Student Learning Assessment

Students who complete the proposed M.S. degree program in Anatomy and Neurobiology will possess advanced skills in experimental design, communication, problem solving, and anatomy and neurobiology research required for positions in a variety of settings. These settings include research laboratories, higher education, research institutes, as well as academic health centers. Assessment methods will involve both direct and indirect assessment tools. Students will be assessed by instructors in each course through various mechanisms that include: class exercises, homework assignments, scenario-based critical thinking exercises, individual and/or group projects, papers, presentations, and examinations. Students will also be assessed by their advisor, their graduate advisory committee, and their program director on their written papers, exams, their progress toward completing their thesis research project, their construction of their thesis including all necessary analyses, and their ability to present and defend their thesis.

Learning Outcomes

The following are the learning outcomes for the proposed modified program. Students will be able to:

- Define the molecular, cellular, and tissue-level organization of the central and peripheral nervous system.
- Apply the properties of cells that make up the nervous system including the propagation of electrical signals used for cellular communication.
- Compare and contrast the properties of individual cells to their function in organized neural circuits and systems.
- Model and explain how the interaction of cells and neural circuits leads to higher level activities such as cognition and behavior.
- Distinguish the fundamental biochemical principals, such as the structure/function of biomolecules, metabolic pathways, and the regulation of biological/biochemical process.
- Generate testable scientific hypotheses and develop research plans to test these hypotheses.
- Evaluate and critically review primary research literature in seminar discussions.
- Engage affectively in independent and collaborative research projects.
- Make presentations that convey complex knowledge in an audience-appropriate and venue-appropriate fashion and answer questions effectively.
- Write scientific texts such as abstracts, full-length manuscripts and research proposals.

Curriculum map for M.S. in Anatomy & Neurobiology

Learning Outcomes	Core and Required Courses	Assessment Methods
Define the molecular, cellular, and tissue-level organization of the central and peripheral nervous system.	ANAT 690 Anatomy & Neurobiology Seminar IBMS 600 Laboratory Safety OVPR 601/602/603 Scientific Integrity ANAT 697 Directed Research	<u>Formative:</u> class discussions; oral presentation; group reading presentations; presentations to advisor and graduate advisory committee <u>Summative:</u> midterm and final exams assessing knowledge of research area and thesis project; presentations to program faculty, advisor and graduate advisory committee assessing research progress
Apply the properties of cells that make up the nervous system including the propagation of electrical signals used for cellular communication.	ANAT 690 Anatomy & Neurobiology Seminar ANAT 697 Directed Research	<u>Formative:</u> Group reading presentations; written assignments; development of thesis; presentations to program faculty, advisor and graduate advisory committee <u>Summative:</u> midterm and final exams assessing explanations of the research area and thesis project; presentations and written thesis provided to program faculty, advisor and graduate advisory committee assessing explanations of research area, thesis project, and research findings
Compare and contrast the properties of individual cells to their function in organized neural circuits and systems	ANAT 610 Systems Neuroscience ANAT 690 Anatomy & Neurobiology Seminar ANAT 697 Directed Research	<u>Formative:</u> class discussions; oral presentation; group reading presentations; presentations to advisor and graduate advisory committee <u>Summative:</u> midterm and final exams assessing explanations of research challenges and

	NEUS 609 Cellular and Molecular Neuroscience	solutions; presentations and written thesis provided to program faculty, advisor and graduate advisory committee assessing research challenges and solutions
Model and explain how the interaction of cells and neural circuits leads to higher level activities such as cognition and behavior.	ANAT 610 Systems Neuroscience ANAT 690 Anatomy & Neurobiology Seminar ANAT 697 Directed Research BIOC 503 Biochemistry, Cell and Molecular Biology BIOC 504 Biochemistry, Cell and Molecular Biology NEUS 609 Cellular and Molecular Neuroscience	<u>Formative:</u> class discussions; oral presentation; group reading presentations; presentations to advisor and graduate advisory committee <u>Summative:</u> midterm and final exams assessing knowledge of research area and thesis project; presentations to program faculty, advisor and graduate advisory committee assessing knowledge of research area and thesis project
Distinguish the fundamental biochemical principals, such as the structure/function of biomolecules, metabolic pathways, and the regulation of biological/biochemical process.	ANAT 610 Systems Neuroscience ANAT 690 Anatomy & Neurobiology Seminar ANAT 697 Directed Research BIOC 503 Biochemistry, Cell and Molecular Biology BIOC 504 Biochemistry, Cell and Molecular Biology	<u>Formative:</u> class discussions; oral presentation; group reading presentations; presentations to advisor and graduate advisory committee <u>Summative:</u> midterm and final exams assessing knowledge of research area and thesis project; presentations to program faculty, advisor and graduate advisory committee assessing knowledge of research area and thesis project

	NEUS 609 Cellular and Molecular Neuroscience	
Generate testable scientific hypotheses and develop research plans to test these hypotheses.	ANAT 610 Systems Neuroscience ANAT 690 Anatomy & Neurobiology Seminar ANAT 697 Directed Research BIOC 503 Biochemistry, Cell and Molecular Biology BIOC 504 Biochemistry, Cell and Molecular Biology NEUS 609 Cellular and Molecular Neuroscience	<u>Formative:</u> class discussions; oral presentation; group reading presentations; presentations to advisor and graduate advisory committee <u>Summative:</u> midterm and final exams assessing knowledge of research area and thesis project; presentations to program faculty, advisor and graduate advisory committee assessing knowledge of research area and thesis project
Evaluate and critically review primary research literature in seminar discussions.	ANAT 690 Anatomy & Neurobiology Seminar ANAT 697 Directed Research	<u>Formative:</u> group reading presentations; presentations to advisor and graduate advisory committee <u>Summative:</u> midterm and final exams assessing knowledge of research area and thesis project; presentations to program faculty, advisor and graduate advisory committee assessing knowledge of research area and thesis project
Make presentations that convey complex knowledge in an audience-appropriate and venue-appropriate fashion and answer questions effectively.	ANAT 690 Anatomy & Neurobiology Seminar ANAT 697 Directed Research	<u>Formative:</u> presentations to advisor and graduate advisory committee <u>Summative:</u> presentations to program faculty, advisor and graduate

		advisory committee assessing knowledge
Write scientific texts such as abstracts, full-length manuscripts and research proposals.	ANAT 690 Anatomy & Neurobiology Seminar ANAT 697 Directed Research	<u>Formative:</u> presentations to advisor and graduate advisory committee <u>Summative:</u> presentations to program faculty, advisor and graduate advisory committee assessing knowledge, thesis

Employment Skills/Workplace Competencies

Graduates of the proposed modified M.S. degree program in Anatomy & Neurobiology will be able to:

- Design and conduct studies in neuroscience research that investigates human disease and methods to prevent and treat them or basic science that investigates mechanisms of nervous system function
- Determine appropriate neuroscience methodology to apply to a particular problem within human disease or basic mechanisms of nervous system function
- Prepare and analyze biological or medical samples to investigate causes and treatment of neuroscience diseases
- Write, interpret and critique neuroscience related research
- Communicate scientific research and results in written and oral forms to specialists and non-specialists
- Teach neuroanatomy and neuroscience at the advanced level

Justification for Proposed Modified Degree Program

Rationale for the Program

There are two factors to justify the need for the proposed modified degree program: 1) a reduction in credit hours will align the degree program with similar or related thesis-based master's programs within Virginia and at SCHEV peer institutions; and 2) the reduction in credit hours will result in a significant cost savings to students.

Alignment with Peer Programs

Within the Commonwealth, we found no other M.S. degree programs in Anatomy, M.S. degree programs in Neurobiology or M.S. degree programs in Neuroscience that require a thesis. There are, however, six public institutions with thesis-based master's programs with distinct curricula in biology or biological sciences: George Mason University, James Madison University, Old

Dominion University, The University of Virginia, Virginia State University, and Virginia Polytechnic Institute and State University. The programs at these institutions require 30-31 credits. The research requirement for the thesis-based programs at the aforementioned public institutions ranges from 3 credit hours to 12 credit hours.

Within SCHEV peer institutions outside of the Commonwealth, there are 11 institutions with M.S. degree programs that offer comparable thesis-based training in Anatomy, Biomedical Sciences, Cell Biology, Pathology, Neurobiology or Neuroscience. The VCU SCHEV Peer institutions include: Boston University, Drexel University, East Carolina University, Indiana University, Pennsylvania State University, Temple University, The Ohio State University, State University of New York-Buffalo, University of Illinois at Chicago, University of Louisville, University of Missouri, and University of Texas-San Antonio. These programs require 30-38 credits for the degree. The research requirement for the thesis-based programs at the aforementioned SCHEV peer institutions ranges from 6 credit hours to 18 credit hours.

The proposed modified degree program of 37 credits would align with comparable programs at public institutions in Virginia and with VCU SCHEV peer institutions. By reducing the credit hours, VCU's program will be more competitive with similar degree programs without compromising the quality or rigor of the degree program.

Tuition Cost Savings for Students

The reduction in credit hours for the proposed modified M.S. in Anatomy & Neurobiology translates into an overall tuition savings for students. The 2019-2020 tuition rates approved by the VCU Board of Visitors for on campus courses were used for the calculations (\$417.00/per credit hour (in state): \$1,129.00/per credit hour (out-of-state). Part-time students at 1-8 credit hours per fall/spring semester will save approximately \$20,000 (in-state students) or \$42,000 (out-of-state students). Full-time students at 9-15 credit hours will save at least \$12,000 (in-state) or \$32,000 (out-of-state). Current enrollment shows that 20% of the students are part-time. The reduction in cost will make VCU's program more competitive with degree programs in-state and out-of-state. These cost savings to the students in the proposed modified M.S. in Anatomy & Neurobiology would be achieved without sacrificing the quality of the program.

See Appendix C for a list of programs at public institutions in Virginia.
See Appendix D for a list of programs at VCU SCHEV peer institutions.

Student Demand

Student enrollment in the proposed modified MS Anatomy & Neurobiology program is expected to remain about the same as student enrollment in the current MS Anatomy & Neurobiology program. Faculty teaching in the current degree program will remain the same for the proposed modified degree program. Student enrollment in the proposed modified degree program is expected to remain at a level appropriate to faculty resources.

State Council of Higher Education for Virginia
Summary of Projected Enrollments in Proposed Program

Year 1		Year 2		Year 3		Year 4 Target Year (2-year institutions)			Year 5 Target Year (4-year institutions)		
<u>2021 - 2022</u>		<u>2022 - 2023</u>		<u>2023 - 2024</u>		<u>2024 - 2025</u>			<u>2025 - 2026</u>		
HDCT <u>10</u>	FTES <u>8</u>	HDCT <u>10</u>	FTES <u>8</u>	HDCT <u>10</u>	FTES <u>8</u>	HDCT <u>10</u>	FTES <u>8</u>	GRAD _____	HDCT <u>10</u>	FTES <u>8</u>	GRAD <u>10</u>

Assumptions:

95% Retention

80% Full-time students / 20% Part-time students

Full-time students: 9 credit hours per semester

Part-time students: 1-8 credit hours per semester

Full-time students graduate in 2 years

Part-time students graduate in 3 years

Summer is required

Duplication

Within the Commonwealth, there are no M.S. in Anatomy, MS Neurobiology, M.S. in Anatomy and Neurobiology, or M.S. in Neuroscience degree programs requiring a thesis that duplicated the proposed modified M.S. in Anatomy & Neurobiology program.

Projected Resources for the Proposed Modified Program

Resource Needs

Virginia Commonwealth University and the School of Medicine has all of the faculty, classified support staff, equipment, library and other resources necessary to offer the proposed modified M.S. in Anatomy and Neurobiology. The following categories detail the resources required to operate the program in its initiation in fall 2020 and through the target year 2025. Assessments of the need for full-time faculty, part-time faculty, and adjunct faculty are based on the following ratio of student enrollment to faculty effort: 8 FTE of enrollment requires one FTE faculty for instruction.

Full-time Faculty

No faculty will deliver more than 50% teaching effort for the proposed modified program.

Part-time Faculty

Forty-one faculty members will teach the required core, elective and directed research courses. Each faculty member teaching in the proposed modified program will have a teaching load less than 50%. The proposed modified program will require 1.00 FTE of faculty for instruction at initiation in 2020-2021 and 1.0 FTE of faculty for instruction each year thereafter through the target year of 2024-2025. The average annual salary for the instructional faculty members is \$140,000 with annual benefits of \$56,140.

Program Director

The proposed modified program will have a graduate program director to administer the program. The proposed modified program will require 0.10 FTE of effort from the graduate program director at initiation in 2020-2021 and 0.10 FTE of effort each year thereafter through the target year of 2024-2025. The annual salary for the graduate program director is \$152,000 with annual benefits of \$60,952.

Adjunct Faculty

No adjunct faculty will be needed to initiate and sustain the proposed modified program.

Graduate Assistants

No graduate assistantships will be needed to initiate and sustain the proposed modified program.

Classified Positions

No additional classified staff positions will be needed to initiate or sustain the proposed modified program. The current staff will be sufficient to support the proposed modified program.

Targeted Financial Aid

No targeted financial aid will be offered to initiate and sustain the proposed modified degree program.

Equipment, (including computers)

No new equipment is needed to initiate and sustain the proposed modified degree program. The equipment available, including computers, is sufficient for the proposed modified program. Computer and instructional equipment resources are provided by the School and the University.

Library

No new Library resources will be required to initiate and sustain the proposed modified program. The library has sufficient and appropriate journals, books, online journals to support the proposed modified degree program.

Telecommunications

No additional resources are needed to initiate or sustain the proposed modified program. Telecommunications equipment is provided by the School and the University.

Space

No new or additional space is required to initiate or sustain the proposed modified degree program. The program has adequate space for classrooms, meetings, and offices.

Special Tuition or Fee Charges

There are no special tuition or fee charges for the proposed modified degree program.

Other Resources (specify)

No other resources are needed to initiate and sustain the proposed modified degree program. No resources are needed for advertising and promotion of the proposed modified degree program.

Funds to Initiate and Operate the Degree Program

Figures provided in the table below will be compared to SCHEV funding estimates using the current base adequacy model. This comparison will serve as a reference for the estimated costs. If there are large discrepancies, SCHEV may request additional clarification to ensure the institution's assumptions are correct, or require modifications as a condition of approval.

Cost and Funding Sources to Initiate and Operate the Program			
Informational Category		Program Initiation Year 2021 - 2022	Program Full Enrollment Year ¹ 2023 - 2024
1.	Projected Enrollment (Headcount)	10	10
2.	Projected Enrollment (FTE)	8	8
3.	Estimated Tuition and E&G Fees for Students in the Proposed Program	\$19,388	\$19,388
4.	Projected Revenue from Tuition and E&G Fees Due to the Proposed Program	\$155,104	\$155,104
5.	Other Funding Sources Dedicated to the Proposed Program (e.g., grant, business entity, private sources)		

¹ For the "Full Enrollment Year" use: for associate degrees, initiation year plus 1; for baccalaureate degrees, initiation plus 3; for masters degrees, initiation plus 2; for doctoral degrees, initiation plus 3.

Part V: Certification Statements

1. A request of any kind will be submitted to the General Assembly for funds to initiate and/or maintain the proposed degree program.

Yes ☐
No ☒

If “Yes” is checked, include narrative text to describe: when the request will be made, how much will be requested, what the funds will be used for, and what will be done if the request is not fulfilled.

2. The proposed degree program is included in the institution’s most recent six-year plan.

Yes ☒
No ☐

If “No” is checked, include narrative text to explain why the program is being advanced at the present time despite not being included in the six-year plan.

3. The institution’s governing board has been provided information regarding duplication (if applicable) and labor market projections as part of its approval action.

Yes ☒
No ☐

If “No” is checked, include narrative text to explain why the governing board has not been provided the information.

The institution’s Chief Academic Officer attests to the accuracy of the above statements

Gail Hackett, Ph.D.

Name (Printed)

Appendices

Appendix A: Sample Plans of Study

Full-Time Student

Year	Fall Semester	Spring Semester	Summer Semester
Year 1	ANAT 690 Anatomy and Neurobiology seminar (1)	ANAT 690 Anatomy and Neurobiology seminar (1)	ANAT 697 Directed Research in Anatomy (1)
	ANAT 697 Directed Research in Anatomy (1)	ANAT 697 Directed Research in Anatomy (3)	
	BIOC 503 Biochemistry, Cell and Molecular Biology (5)	BIOC 504 Biochemistry, Cell and Molecular Biology (5)	
	IBMS 600 Laboratory Safety (1)		
	Restricted Elective (1)		
Year 2	ANAT 690 Anatomy and Neurobiology seminar (1)	ANAT 690 Anatomy and Neurobiology seminar (1)	
	ANAT 697 Directed Research in Anatomy (4)	ANAT 610 Systems Neuroscience (4)	
	NEUS 609 Cellular and Molecular Neuroscience (4)	ANAT 697 Directed Research in Anatomy (4)	

Total credit hours: 37

Full-Time

First Year - Fall Semester – 9 credits

First Year - Spring Semester – 9 credits

First Year - Summer Semester – 1 credits

Subtotal - 19 credits

Second Year - Fall Semester – 9 credits

Second Year - Spring Semester – 9 credits

Subtotal – 18 credits

Total credit hours: 37

Part-Time Student

Year	Fall Semester	Spring Semester
Year 1	ANAT 690 Anatomy and Neurobiology seminar (1)	ANAT 690 Anatomy and Neurobiology seminar (1)
	ANAT 697 Directed Research in Anatomy (1)	ANAT 697 Directed Research in Anatomy (1)
	BIOC 503 Biochemistry, Cell and Molecular Biology (5)	BIOC 504 Biochemistry, Cell and Molecular Biology (5)
	IBMS 600 Laboratory Safety (1)	OVPR 602, Responsible conduct of Research (1)
Year 2	ANAT 690 Anatomy and Neurobiology seminar (1)	ANAT 610 Systems Neuroscience (4)
	ANAT 697 Directed Research in Anatomy (1)	ANAT 690 Anatomy and Neurobiology seminar (1)
	NEUS 609 Cellular and Molecular Neuroscience (4)	ANAT 697 Directed Research in Anatomy (1)
Year 3	ANAT 690 Anatomy and Neurobiology seminar (1)	ANAT 690 Anatomy and Neurobiology seminar (1)
	ANAT 697 Directed Research in Anatomy (3)	ANAT 697 Directed Research in Anatomy (4)

Total credit hours: 37Full-Time

First Year - Fall Semester – 8 credits

First Year - Spring Semester –8 credits

Subtotal - 16 credits

Second Year - Fall Semester – 6 credits

Second Year - Spring Semester – 6 credits

Subtotal – 12 credits

Third Year - Fall Semester – 4 credits

Third Year - Spring Semester –5 credits

Subtotal – 9 credits**Total credit hours: 37**

Appendix B: Course Descriptions

Core Courses

ANAT 610. Systems Neuroscience. 4 Hours.

Semester course; 4 lecture hours. 4 credits. A study the neural circuits and function of systems in the central nervous system. Topics include sensory perception and integration, neural control of reflexes and voluntary movement, as well as a neural-systems approach to understanding certain diseases.

ANAT 690. Anatomy and Neurobiology Seminar. 1 Hour.

1 lecture hour. 1 credit. A course consisting of faculty and student-led seminars presenting current research in neurobiology, immunobiology, and reproductive biology. Graded as S/U/F.

ANAT 697. Directed Research. 1-15 Hours.

1-15 credits. Research leading to the M.S. or Ph.D. degree and elective research projects for other students. Graded as S/U/F.

BIOC 503. Biochemistry, Cell and Molecular Biology. 1-5 Hours.

Continuous course; variable hours. 1-5 credits. Prerequisites: undergraduate organic chemistry, physical chemistry recommended. Permission of instructor is required for any student not enrolled in a graduate (certificate, M.S. or Ph.D.) program. A comprehensive introductory course that describes basic biochemistry and reviews current concepts of modern cell and molecular biology.

BIOC 504. Biochemistry, Cell and Molecular Biology. 1-5 Hours.

Continuous courses; variable hours. 1-5 credits. Prerequisites: undergraduate organic chemistry, physical chemistry recommended. Permission of instructor is required for any student not enrolled in a graduate (certificate, M.S. or Ph.D.) program. A comprehensive introductory course that describes basic biochemistry and reviews current concepts of modern cell and molecular biology.

IBMS 600. Laboratory Safety. 1 Hour.

Semester course; 1 lecture hour. 1 credit. Describes health hazards commonly found in biomedical laboratories and their appropriate safety precautions, government regulations and emergency responses. Includes hazards of working with micro-organisms, experimental animals, and chemical, electrical and fire hazards. Graded as S/U/F.

NEUS 609. Cellular and Molecular Neuroscience. 4 Hours.

Semester course; 4 lecture hours. 4 credits. Recommended preparation: BIOC 503 or BIOC 504 or equivalent. Designed as an interdisciplinary introduction to the cellular and molecular aspects of central nervous system function. The basic principles of neuroscience including neuronal structure, electrical properties of single neurons, cell biology of neurotransmitter release and postsynaptic function will be discussed, followed by intracellular signaling in neurons, gene regulation, transgenic model systems, glia, neuronal development, basic neurochemistry, and molecular and cellular aspects of motor, sensory and integrative function. The course will conclude with lectures on various aspects of neural injury and disease, including traumatic brain injury, Parkinson's and Alzheimer's diseases.

Restricted Electives

OVPR 601. Scientific Integrity. 1 Hour.

Semester course; 1 lecture hour. 1 credit. A survey of contemporary issues relating to responsible conduct in research. Topics include academic integrity, mentoring, authorship and peer review, use of humans and animals in biomedical research, ownership of data, intellectual property, conflict of interest, scientific record keeping, collaborative research, research misconduct, and genetic technology. Graded as pass/fail.

OVPR 602. Responsible Scientific Conduct. 1 Hour.

Semester course; 1 lecture hour. 1 credit. Priority registration to postdoctoral trainees and graduate students; others by permission of instructor. A survey of contemporary issues relating to responsible conduct in research. Topics include research integrity, mentoring, authorship and peer review, use of humans and animals in biomedical research, ownership of data, intellectual property, conflict of interest, scientific record keeping, collaborative research, research misconduct, and genetic technology. Graded as pass/fail.

OVPR 603. Responsible Conduct of Research. 1 Hour.

Short course; 1 lecture hour. 1 credit. Restricted to graduate or professional students, with preference given to Preparing Future Faculty students. Registration requires permission of PFF Program office. This course is designed to provide a learning experience that will enable students to develop and refine skills needed to solve problems involving relevant topic areas of responsible scientific conduct and to clearly articulate ethically and legally acceptable solutions to problems posed about scientific conduct. Content of the course includes relevant guidelines, policies and laws bearing on the conduct of scientific research including those dealing with scientific authorship, use of humans and animals in research, conflict of interest, data ownership, scientific record keeping, collaborative research, and ownership, protection and use of intellectual property in the arena of scientific research. Conventions and normative behavior related to responsibilities in the scientific mentor-trainee relationship will also be covered. Graded as pass/fail.

Appendix C: List of Programs at Public Institutions in Virginia

Total credit hours for the degree program and research credit hours for the Thesis requirement.

Institution	Credit hours	Thesis Research Credit Hours
George Mason University M.S. in Biology	30	9
James Madison University M.S. in Biology	30	6
Old Dominion University M.S. in Biology	31	3
University of Virginia M.S. in Biology	30	6
Virginia State University M.S. in Biology	30	3
Virginia Polytechnic Institute and State University M.S. in Biological Sciences	30	12

Appendix D: List of programs at VCU SCHEV Peer Institutions

Total credit hours for the degree program and research credit hours for the Thesis requirement.

Peer Institutions	Credit hours	Thesis Research Credit Hours
Boston University M.S. in Anatomy & Neurobiology	32	6
Drexel University M.S. in Neuroscience	30	18
East Carolina University M.S. in Biomedical Sciences	38	6
Indiana University M.S. in Anatomy & Cell Biology	30	12
Pennsylvania State University M.S. in Anatomy	30	6
Temple University M.S. in Neuroscience	30	6
The Ohio State University M.S. in Anatomy	30	6
State University of New York-Buffalo M.S. in Anatomical Sciences	30	9
University of Illinois at Chicago M.S. in Anatomy & Cell Biology	32	12
University of Louisville M.S. in Anatomical Sciences and Neurobiology	30	9
University of Missouri M.S. in Pathology & Anatomical Sciences	30	12

Table of Contents

Description of the Proposed Modified Program	1
Modification Background	1
Modified Degree Program	1
Online Delivery.....	4
Curriculum	4
Student Learning Assessment.....	6
Employment Skills.....	9
Justification for the Proposed Modified Degree Program	9
Rationale for the Program.....	9
Student Demand.....	10
Duplication.....	11
Projected Resource Needs for the Proposed Modified Program	12
Resource Needs.....	12
Appendices.....	16
Appendix A: Sample Plan of Study.....	A-1
Appendix B: Course Descriptions	B-1
Appendix C: List of programs at VCU SCHEV Peer Institutions.....	C-1

Description of the Proposed Modified Program

Modification Background

Virginia Commonwealth University (VCU) requests approval for a modification of the Master of Science (MS) degree program in Biostatistics. The proposed modified program will reside in the VCU School of Medicine. The target start date for the modified program is fall 2021.

VCU seeks two modifications to the MS in Biostatistics programs and its concentrations to help better achieve the learning outcomes for its students in enabling them to (i) explain biostatistical concepts, ideas and methods in plain terms to non-biostatistical researchers, (ii) demonstrate the ability to effectively collaborate with biostatistical and health science researchers, (iii) develop fluency in several computational languages, and (iv) display exceptional written and oral communication skills. The changes were developed over several years through deep and engaging conversations between faculty in the VCU Department of Biostatistics and administrators from across the VCU community. These discussions included a review of peer and aspirational-peer programs in Virginia and beyond. The particular modifications are listed here as follows:

1. Reduce to the total number of credits for the degree program.
2. Change the instructional modality from traditional face-to-face to “hybrid: in-person and online.”

These proposed modifications would bring several benefits to students. Reducing the total credit requirement to 33 would bring the MS degree program in line with comparative peer degree programs, especially those with hybrid or exclusively online instruction modalities. The reduction in credits would shorten the time to completion of degree requirements, needing only three semesters (fall, spring and summer) for full-time students to graduate. This reduction by 9 credits will also provide students with substantial tuition savings. The distinctions made to the degree program and its concentrations in terms of defined concentration courses and restricted electives will continue to make clear the goals and training paths of these programs, which help students better decide which concentration is best suited to their development goals. The hybrid instructional modality will also give students the benefit of selecting the learning style (in person or online) most suitable to their learning needs and availability.

Modified Degree Program

The MS in Biostatistics and its concentrations are being modified by: (i) reducing the total number of credits, and (ii) changing the instructional modality from strictly “in person” to “hybrid: in-person and online.” VCU is proposing to reduce credit hours to 33, which will be a decrease of eight credits each for the MS in Biostatistics and the Genomic Biostatistics concentrations, and a decrease of one credit for the Clinical Research and Biostatistics concentration. The common core curriculum will consist of 18 credits. The MS program and each concentration will have at least one three-credit required concentration course and at least six credits from a selection of restricted electives. No new courses are needed for these proposed modifications.

Current and Proposed Curricula

Current Curriculum MS in Biostatistics	Proposed Modified Curriculum MS in Biostatistics
Core Courses – 27 credits	Core Courses – 18 credits
BIOS 603 Biostatistical Consulting (1, taken four semesters)	BIOS 603 Biostatistical Consulting (1, taken two semesters)
BIOS 524 Biostatistical Computing (3)	BIOS 524 Biostatistical Computing (3)
BIOS 601 Analysis of Biomedical Data I (3)	BIOS 601 Analysis of Biomedical Data I (3)
BIOS 602 Analysis of Biomedical Data II (3)	BIOS 602 Analysis of Biomedical Data II (3)
BIOS 606 Clinical Trials (3)	BIOS 606 Clinical Trials (3 cr)
BIOS 653 Biostatistical Methods (4)	BIOS 690 Biostatistical Research Seminar (1, taken two semesters)
BIOS 654 Biostatistical Methods (4)	BIOS 697 Directed Research in Biostatistics (1)
BIOS 690 Biostatistical Research Seminar (1, taken two semesters)	OVPR 601 Scientific Integrity (1)
OVPR 601 Scientific Integrity (1)	
Concentration Courses – 3 credits	Concentration Courses – 3 credits
BIOS 512 Basic Mathematical Statistics / BIOS 513 Mathematical Statistics I (3)	BIOS 512 Basic Mathematical Statistics / BIOS 513 Mathematical Statistics I (3)
Restricted Electives – 0 credits	Restricted Electives – 12 credits
	BIOS 514 Mathematical Statistics II
	BIOS 615 Advanced Inference
	BIOS 631 Mixed Models and Longitudinal Data Analysis (4)
	BIOS 647 Survival Analysis (3)
	BIOS 649 Advanced Spatial Data Analysis (3)
	BIOS 653 Biostatistical Methods I (4)
	BIOS 654 Biostatistical Methods II (4)
Total Credits to Degree – 42 credits	Total Credits to Degree – 33 credits

MS Biostatistics with Concentration in Genomic Biostatistics	MS Biostatistics in Genomic Biostatistics
Core Courses – 27 credits	Core Courses – 18 credits
BIOS 603 Biostatistical Consulting (1, taken four semesters)	BIOS 603 Biostatistical Consulting (1, taken two semesters)
BIOS 524 Biostatistical Computing (3)	BIOS 524 Biostatistical Computing (3)
BIOS 601 Analysis of Biomedical Data I (3)	BIOS 601 Analysis of Biomedical Data I (3)
BIOS 602 Analysis of Biomedical Data II (3)	BIOS 602 Analysis of Biomedical Data II (3)
BIOS 606 Clinical Trials (3)	BIOS 606 Clinical Trials (3)
BIOS 653 Biostatistical Methods (4)	BIOS 690 Biostatistical Research Seminar (1, taken two semesters)

BIOS 654 Biostatistical Methods (4)	BIOS 697 Directed Research in Biostatistics (1)
BIOS 690 Biostatistical Research Seminar (1, taken two semesters)	OVPR 601 Scientific Integrity (1)
OVPR 601 Scientific Integrity (1)	
Concentration Courses – 9 credits	Concentration Courses – 9 credits
BIOS 512 Basic Mathematical Statistics /513 Mathematical Statistics I (3)	BIOL 540 Fundamentals of Molecular Genetics (3)
BIOL/BNFO 540 Fundamentals of Molecular Genetics (3)	BIOS 658 Statistical Methods for High-Throughput Genomics Data I (3)
BIOS 658 Statistical Methods for High-Throughput Genomics Data I (3)	BIOS 668 Statistical Methods for High-Throughput Genomics Data II (3)
Restricted Electives – 3 credits	Restricted Electives – 6 credits
BIOS 632 Multivariate Analysis (3)	BIOS 632 Multivariate Analysis (3)
BIOS 667 Statistical Learning and Data Mining (3)	BIOS 667 Statistical Learning and Data Mining (3)
BIOS 668 Statistical Methods for High-Throughput Genomics Data II (3)	BIOS 688 Applied Bayesian Biostatistics (3)
BIOS 691 Special Topics in Biostatistics (3)	
Total Credit Hours - 42	Total Credit Hours – 33 credits

MS Biostatistics with Concentration in Clinical Research and Biostatistics	MS Biostatistics with Concentration in Clinical Research and Biostatistics
Core Courses – 17 credits	Core Courses – 18 credits
BIOS 516 Biostatistical Consulting (1)	BIOS 603 Biostatistical Consulting (1, taken two semesters)
BIOS 531 Clinical Epidemiology (3)	BIOS 524 Biostatistical Computing (3)
BIOS 543 Graduate Research Methods I (3)	BIOS 601 Analysis of Biomedical Data I (3)
BIOS 544 Graduate Research Methods II (3)	BIOS 602 Analysis of Biomedical Data II (3)
BIOS 572 Analysis of Biomedical Data I (3)	BIOS 606 Clinical Trials (3)
BIOS 571 Clinical Trials (3)	BIOS 690 Biostatistical Research Seminar (1, taken two semesters)
OVPR 601 Scientific Integrity (1)	BIOS 697 Directed Research in Biostatistics (1)
	OVPR 601 Scientific Integrity (1)
Concentration Courses – 5 credits	Concentration Courses – 9 credits
BIOS 697 Directed Research in Biostatistics (5)	BIOS 531 Clinical Epidemiology (3)
	BIOS 535 Behavioral Measurement (3)
	BIOS 635 Structural Equation Modeling (3)
Restricted Electives – 0 credits	Restricted Electives – 6 credits
	BIOS 543 Graduate Research Methods I (3)
	BIOS 544 Graduate Research Methods II (3)
	BIOS 549 Spatial Data Analysis (3)

	BIOS 660 Sequential Analysis and Advanced Design and Analysis of Clinical Trials (3)
Total Credit Hours – 34 credits	Total Credit Hours – 33 credits

Online Delivery

The modified degree program will be conducted in both a traditional face-to-face format and fully online. Both the physical space and software to facilitate the synchronous and asynchronous online sessions are currently available. VCU possesses the resources, support, and technology necessary to offer quality online programs, as supported by VCU Technology Services, the Academic Learning Transformation Laboratory (ALT-Lab), and the Center for Teaching and Learning Excellence. The university's primary learning management system is Blackboard. Blackboard is centrally supported by VCU Technology Services which provides technical assistance, training, and system administration. Technology Services also supports a portfolio of academic technology for use online courses. Some examples include the Blackboard Collaborate tool, VoiceThread, SafeAssign plagiarism detection tools, Respondus, and video capture solutions Kaltura and Echo360. Videoconferencing tools used in synchronous courses (Zoom and Blackboard Collaborate) are also supported by Technology Services.

All faculty members assigned to teach in the MS program are required to complete training offered by the VCU Academic Learning Transformation Lab and the VCU Center for Teaching and Learning Excellence. The University has adequate resources to deliver the modified certificate program.

Curriculum

The proposed modifications would result in a MS in Biostatistics degree program and concentrations consisting of 33 credit hours. Students will have the option of choosing to pursue the degree program with a concentration or without a concentration. The two concentrations that will be offered include: Genomics Biostatistics and Clinical Research and Biostatistics. No thesis or capstone are required.

The curricular focus is to train students in the use of modern biostatistical methods and thinking to conduct and advance biomedical research. The core curriculum consists of a balance of didactic and experiential learning. The didactic component will provide students with foundational knowledge and tools for designing and analyzing traditional biomedical research projects. The experiential component will provide students with the opportunity to apply their knowledge and tools in real-world scenarios with biomedical researchers. The required courses and restricted elective courses for each concentration are designed to provide specialized training in those concentration areas, while the selection of restricted elective courses allow students to tailor their training to their career goals. Each concentration has a different focus area. The required courses in the Genomic Biostatistics concentration focus on both didactic and experiential training in quantitative approaches to managing and analyzing high-throughput data, particularly with respect to genomic measurements. The required courses in the Clinical Research & Biostatistics

concentration focus on didactic and experiential training in designing research studies in clinical settings, particularly with respect to observational studies and randomized controlled trials.

Program Requirements

Core Courses - 18 credit hours

BIOS 603 Biostatistical Consulting (1, taken two semesters)
BIOS 524 Biostatistical Computing (3)
BIOS 601 Analysis of Biomedical Data I (3)
BIOS 602 Analysis of Biomedical Data II (3)
BIOS 606 Clinical Trials (3)
BIOS 690 Biostatistical Research Seminar (1, taken two semesters)
BIOS 697 Directed Research in Biostatistics (1)
OVPR 601 Scientific Integrity (1)

Additional Required Course – 3 credit hours

BIOS 512 Basic Mathematical Statistics / BIOS 513 Mathematical Statistics I (3)

Restricted Electives – 12 credit hours

BIOS 514 Mathematical Statistics II (3)
BIOS 615 Advanced Inference (4)
BIOS 631 Mixed Models and Longitudinal Data Analysis (4)
BIOS 647 Survival Analysis (3)
BIOS 653 Biostatistical Methods I (4)
BIOS 654 Biostatistical Methods II (4)

Total credit hours: 33

Genomics Biostatistics Concentration

Core Courses - 18 credit hours

BIOS 603 Biostatistical Consulting (1, taken two semesters)
BIOS 524 Biostatistical Computing (3)
BIOS 601 Analysis of Biomedical Data I (3)
BIOS 602 Analysis of Biomedical Data II (3)
BIOS 606 Clinical Trials (3)
BIOS 690 Biostatistical Research Seminar (1, taken two semesters)
BIOS 697 Directed Research in Biostatistics (1)
OVPR 601 Scientific Integrity (1)

Concentration Courses – 9 credit hours

BIOL 540 Fundamentals of Molecular Genetics (3)
BIOS 658 Statistical Methods for High-Throughput Genomics Data I (3)
BIOS 668 Statistical Methods for High-Throughput Genomics Data II (3)

Restricted Electives – 6 credit hours

BIOS 632 Multivariate Analysis (3)
BIOS 667 Statistical Learning and Data Mining (3)
BIOS 688 Applied Bayesian Biostatistics (3)

Total credit hours: 33

Clinical Research and Biostatistics Concentration**Core Courses - 18 credit hours**

BIOS 603 Biostatistical Consulting (1, taken two semesters)
BIOS 524 Biostatistical Computing (3)
BIOS 601 Analysis of Biomedical Data I (3)
BIOS 602 Analysis of Biomedical Data II (3)
BIOS 606 Clinical Trials (3)
BIOS 690 Biostatistical Research Seminar (1, taken two semesters)
BIOS 697 Directed Research in Biostatistics (1)
OVPR 601 Scientific Integrity (1)

Concentration Courses – 9 credit hours

BIOS 531 Clinical Epidemiology (3)
BIOS 535 Behavioral Measurement (3)
BIOS 635 Structural Equation Modeling (3)

Restricted Electives – 6 credit hours

BIOS 543 Graduate Research Methods I (3)
BIOS 544 Graduate Research Methods II (3)
BIOS 549 Spatial Data Analysis (3)
BIOS 660 Sequential Analysis and Advanced Design and Analysis of Clinical Trials (3)

Total credit hours: 33

See Appendix A for sample plans of study.

See Appendix B for course descriptions.

Student Learning Assessment

Students who complete the proposed MS in Biostatistics will possess advanced skills in the biostatistical analysis in support of biomedical and health sciences research, the ability to collaborate in multidisciplinary groups and teams to design and answer research questions, computational knowledge and proficiency across a number of statistical software platforms, and written and oral competencies needed for collaborative efforts in a variety of settings. These settings include medical and clinical research, population- and community-level studies, and laboratory or “bench” science. Assessment methods include both formative and summative assessment strategies, with each course including multiple mechanisms, including: in-class exercises, homework assignments, group-projects, research reports and summaries, oral

presentations, and written examinations. Students will be provided with adequate and frequent feedback and given ample opportunity to improve their work and understanding. Summative assessments are made for and communicated to all students enrolled in the MS program (full and part time) at the conclusion of each semester, with all faculty participating, in January, June and August.

Learning Outcomes: The following are the learning outcomes for the proposed modified degree program. All students will be able to:

- Explain biostatistical concepts, ideas and methods in plain terms to non-biostatistical researchers.
- Demonstrate the ability to effectively collaborate with biostatistical and health science researchers.
- Develop fluency in several computational languages.
- Display exceptional written and oral communication skills.

Students will acquire additional competencies if they select a concentration area. Students will acquire similar outcomes, however, the outcomes will differ based on the focus area.

Genomic Biostatistics

- Identify and utilize the various formats for high-throughput genomic data.
- Use computational tools for analyzing high-throughput genomic data.

Clinical Research and Biostatistics

- Design an observational or experimental research study in a clinical setting.
- Synthesize findings and evidence from multiple clinical research sources.

Curriculum Map for MS in Biostatistics

Learning Outcomes	Core and Required Courses	Assessment Methods
Explain biostatistical concepts, ideas and methods in plain terms to non-biostatistical researchers	BIOS 512 Basic Mathematical Statistics / BIOS 513 Mathematical Statistics BIOS 601 Analysis of Biomedical Data I BIOS 602 Analysis of Biomedical Data II BIOS 606 Clinical Trials BIOS 690 Biostatistical Research Seminar	<u>Formative:</u> Readings and literature reviews; Homework assignments <u>Summative:</u> Midterm and final examinations; written research reports; oral presentations

Demonstrate the ability to effectively collaborate with biostatistical and health science researchers	BIOS 603 Biostatistical Consulting BIOS 606 Clinical Trials BIOS 697 Directed Research in Biostatistics OVPR 601 Scientific Integrity	<u>Formative:</u> Readings; homework assignments; group assignments; shadowing collaborations with external researchers <u>Summative:</u> Mentored collaborations with external researchers
Develop fluency in several computational languages	BIOS 524 Biostatistical Computing BIOS 601 Analysis of Biomedical Data I BIOS 602 Analysis of Biomedical Data II	<u>Formative:</u> Homework assignments; <u>Summative:</u> Written examinations involving analysis of real data sets
Display exceptional written and oral communication skills	BIOS 603 Biostatistical Consulting BIOS 697 Directed Research in Biostatistics	<u>Formative:</u> Class discussions; written homework and group assignments <u>Summative:</u> Oral presentations; written research report and summaries

Employment Skills

All graduates of the proposed modified MS degree program in Biostatistics will be able to:

- Prospectively draft a detailed and thorough analysis plan.
- Transform data from source files into formats suitable for biostatistical analysis.
- Perform data management and analysis functionalities in at least two separate computational languages.
- Summarize data and information with numerical, tabular and visual representations.
- Conduct formal hypothesis tests.
- Construct multivariable models for various types of outcome measurements.
- Provide comprehensive written summaries of data management and analytic methods and findings.
- Orally communicate results from data management and analytic methods in plain language.

Based on the concentration, students will acquire additional skills and competencies.

Genomic Biostatistics

- Process, manage and store high-throughput genomic data.
- Perform analyses unique to high-throughput genomic data.

Clinical Research and Biostatistics

- Design a research proposal unique to clinical settings.
- Analyze clinical research data accounting for unique characteristics from various clinical settings.

Justification for the Proposed Modified Degree Program

Rationale for the Program

There are three factors to justify the need for the proposed modified degree program: 1) a reduction in credit hours will align the degree program with programs at peer institutions, 2) increase flexibility for students to participate in the program, and 3) the reduction in credit hours will result in both time and cost savings to students.

Alignment with Programs at SCHEV Peer Institutions

Of the 25 peer institutions identified by the State Council of Higher Education for Virginia (SCHEV), 18 institutions offer M.S. degrees in Biostatistics, ranging in total credit hours between 30 and 48. The proposed modified degree program of 33 credits would align with many of these peer institution programs, as 11 of the 18 (61%) have credit hour requirements that are similar to the proposed degree program modification (30-36).

Increase Student Flexibility

The proposed modified degree program will increase student flexibility in allowing them to address their training needs. The online format will allow students to decide whether to attend courses in-person or to take them online. Allowing students the choice of in-person or online

learning will increase their ability to compromise their learning and personal or professional schedules, especially for those students who work part- or full-time. The proposed modification also contains sets of restricted elective courses, which will allow students to tailor and personalize their course selection to fulfill and achieve their particular training goals.

Time and Tuition Cost Savings

The reduction in credit hours for the proposed modified MS in Biostatistics translates into an overall tuition savings for part-time and full-time students. The 2019-2020 tuition rates approved by the VCU Board of Visitors for on campus courses were used for the calculations. Part-time students at 1-8 credit hours will save \$7,272 (in-state students) or \$14,211 (out-of-state) and full-time students at 15 credit hours will save \$7,272 (in-state) or \$14,211 (out-of-state). Current enrollment shows that 50% of the students are part-time. The reduction in cost will also make VCU's program competitive with degree programs in-state and out-of-state. These cost savings to the students in the proposed modified MS in Biostatistics program would be achieved without sacrificing the quality or rigor of the program.

See Appendix C for a list of SCHEV peer programs.

Student Demand

Student enrollment in the proposed modified MS degree program in Biostatistics is expected to begin at 5 students per year, which is similar to the current annual new-student enrollment rate. Faculty teaching in the existing degree program will remain the same for the proposed modified degree program. It is expected that student enrollment in the proposed modified degree program will increase by 2 additional students per year, which would still remain at a level appropriate to faculty resources.

State Council of Higher Education for Virginia
Summary of Projected Enrollments in Proposed Program

Year 1		Year 2		Year 3		Year 4 Target Year (2-year institutions)			Year 5 Target Year (4-year institutions)		
20 <u>21</u> - 20 <u>22</u>		20 <u>22</u> - 20 <u>23</u>		20 <u>23</u> - 20 <u>24</u>		20 <u>24</u> - 20 <u>25</u>			20 <u>25</u> - 20 <u>26</u>		
HDCT <u>5</u>	FTES <u>3</u>	HDCT <u>11</u>	FTES <u>5</u>	HDCT <u>15</u>	FTES <u>7</u>	HDCT <u>18</u>	FTES <u>8</u>	GRAD _____	HDCT <u>21</u>	FTES <u>9</u>	GRAD <u>10</u>

Assumptions:

90% Retention
 20% Full-time students
 80% Part-time students
 Full-time students: 15 credit hours
 Part-time students: 6 credit hours
 Full-time students graduate in 1 year
 Part-time students graduate in 2 years
 Summer enrollment is required

Duplication

There is one public university in Virginia that offers a similar degree program to the proposed modified MS in Biostatistics: George Mason University. This degree program is offered in a face-to-face delivery format.

George Mason University (GMU)

GMU offers a MS in Biostatistics that is related to the proposed modified degree program. GMU's program requires students to complete 30 credit hours. There are 3 required courses in the Statistics Core (9 credit hours), 1 required course and 2 restricted elective courses in the "Bio" Core (9 credit hours), and 1 restricted elective course in the "Research" Core (3 credit hours). This program trains students to analyze "difficult data specific to biology and health" and also prepares students who wish to pursue a Ph.D. in Biostatistics.

Similarities: The similarities between the VCU and GMU MS programs in Biostatistics are mostly in the didactic course content. Like the GMU program, the proposed modified VCU program would be able to be completed in one year (three semesters) due to the lower number of total required credits.

Differences: The differences between the VCU and GMU MS programs in Biostatistics are substantial. The first difference is that the proposed modified VCU program would have hybrid, allowing students the flexibility to decide whether to attend in-person or online. The second

difference is that the VCU program emphasizes more greatly experiential learning, as evidenced by at least 6 credits dedicated to training in collaboration, consultation, research and professionalism. The proposed modified VCU MS program also offers a choice of concentrations (Genomic Biostatistics; Clinical Research and Biostatistics), whereas the GMU program does not.

Enrollment and Degrees Awarded at Comparable Programs in Virginia

Enrollment	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019
George Mason University	5	5	5	4	NA*
Virginia Commonwealth University	2	2	5	0	7
Degrees Awarded	Year 2015	Year 2016	Year 2017	Year 2018	Year 2019
George Mason University	1	3	2	1	NA*
Virginia Commonwealth University	3	2	4	2	3

*Data not available from the SCHEV Degree Program Inventory.

Projected Resource Needs for the Proposed Modified Program

Resource Needs

Virginia Commonwealth University and the School of Medicine have all of the faculty, classified support staff, equipment, library and other resources required to offer the proposed modified MS in Biostatistics. The following categories detail the resources required to operate the program in its initiation in fall 2021 and through the target year. Assessments of the need for full-time faculty, part-time faculty, and adjunct faculty are based on the following ratio of student enrollment to faculty effort: 7 FTE of enrollment requires one FTE faculty for instruction.

Full-Time Faculty

No faculty will deliver more than 25% teaching effort for the proposed modified program.

Part-Time Faculty

Fourteen faculty members will teach the core and required courses. Each faculty teaching in the proposed modified program will have a teaching load less than 25%. The proposed modified program will require 0.42 FTE of faculty instructional effort at the initiation with an increase to 1.28 FTE of faculty instructional effort by the target year of 2025-2026.

Adjunct Faculty

Adjunct faculty will not be needed to initiate or sustain the proposed modified program.

Graduate Assistants

No graduate assistantships will be needed to initiate or sustain the proposed modified program.

Classified Positions

One classified staff position will be used to support the proposed modified degree program. The administrative assistant will provide 0.3 FTE to support the program. The administrative assistant has a salary of \$53,000 with benefits of \$22,000.

Equipment

No new equipment is needed to initiate and sustain the proposed modified degree program. The equipment available, including computers, is sufficient for the proposed modified program. Computer and instructional equipment resources are provided by the School and University.

Library

No new library resources will be required to initiate and sustain the proposed modified program. The library has sufficient and appropriate journals, books and online journals to support the proposed modified degree program.

Telecommunications

No additional resources are needed to initiate or sustain the proposed modified program. Telecommunications equipment is provided by the School and the University.

Space

No new or additional space is required to initiate or sustain the proposed modified degree program. The program has adequate space for classrooms, meetings, and offices.

Targeted Financial Aid

No targeted financial aid will be offered to initiate and sustain the proposed modified degree program.

Special tuition or fee charges

No special tuition or fee charges will be needed to initiate and sustain the proposed modified degree program.

Other Resources

No other resources are needed to initiate and sustain the proposed modified degree program. No resources are needed for advertising and promotion of the proposed modified degree program.

Funds to Initiate and Operate the Degree Program

Figures provided in the table below will be compared to SCHEV funding estimates using the current base adequacy model. This comparison will serve as a reference for the estimated costs. If there are large discrepancies, SCHEV may request additional clarification to ensure the institution's assumptions are correct, or require modifications as a condition of approval.

Cost and Funding Sources to Initiate and Operate the Program			
Informational Category		Program Initiation Year 2021 - 2022	Program Full Enrollment Year¹ 2023 - 2024
1.	Projected Enrollment (Headcount)	5	15
2.	Projected Enrollment (FTE)	3	7
3.	Estimated Tuition and E&G Fees for Students in the Proposed Program	\$19,388	\$19,388
4.	Projected Revenue from Tuition and E&G Fees Due to the Proposed Program	\$ 58,164	\$ 135,716
5.	Other Funding Sources Dedicated to the Proposed Program (e.g., grant, business entity, private sources)	0	0

¹ For the "Full Enrollment Year" use: for associate degrees, initiation year plus 1; for baccalaureate degrees, initiation plus 3; for masters degrees, initiation plus 2; for doctoral degrees, initiation plus 3.

Certification Statements

1. A request of any kind will be submitted to the General Assembly for funds to initiate and/or maintain the proposed degree program.

Yes _____

No _____

If “Yes” is checked, include narrative text to describe: when the request will be made, how much will be requested, what the funds will be used for, and what will be done if the request is not fulfilled.

2. The proposed degree program is included in the institution’s most recent six-year plan.

Yes _____

No _____

If “No” is checked, include narrative text to explain why the program is being advanced at the present time despite not being included in the six-year plan.

3. The institution’s governing board has been provided information regarding duplication (if applicable) and labor market projections as part of its approval action.

Yes _____

No _____

If “No” is checked, include narrative text to explain why the governing board has not been provided the information.

The institution’s Chief Academic Officer attests to the accuracy of the above statements

Name

Signature

Date

Appendices

Appendix A: Sample Plan of Study

Full-Time Students in MS in Biostatistics

Year	Fall Semester	Spring Semester	Summer Semester
Year 1	BIOS 512 Basic Mathematical Statistics (3)	BIOS 602 Analysis of Biomedical Data II (3)	Elective # 3 (3)
	BIOS 524 Biostatistical Computing (3)	BIOS 603 Biostatistical Consulting (1)	
	BIOS 601 Analysis of Biomedical Data I (3)	BIOS 606 Clinical Trials (3)	
	BIOS 603 Biostatistical Consulting (1)	BIOS 690 Biostatistical Research Seminar (1)	
	BIOS 690 Biostatistical Research Seminar (1)	BIOS 697 Directed Research in Biostatistics (1)	
	OVPR 601 Scientific Integrity (1)	BIOS 647 Survival Analysis (3)	
	Elective #1 (3) Total Fall: 15 credits	Elective # 2 (3) Total Spring: 15 credits	Total Summer: 3 credits
Total credit hours - 33			

Full-Time Students in MS in Biostatistics with Concentration in Genomic Biostatistics

Year	Fall Semester	Spring Semester	Summer Semester
Year 1	BIOL 540 Fundamentals of Molecular Genetics (3)	BIOS 602 Analysis of Biomedical Data II (3)	Elective # 2 (3)
	BIOS 524 Biostatistical Computing (3)	BIOS 603 Biostatistical Consulting (1)	
	BIOS 601 Analysis of Biomedical Data I (3)	BIOS 606 Clinical Trials (3)	
	BIOS 603 Biostatistical Consulting (1)	BIOS 690 Biostatistical Research Seminar (1)	
	BIOS 690 Biostatistical Research Seminar (1)	BIOS 697 Directed Research in Biostatistics (1)	
	OVPR 601 Scientific Integrity (1)	BIOS 658 Statistical Methods for High-Throughput Genomics I (3)	
	Elective #1 (3)	BIOS 632 Multivariate Analysis (3)	
	Total Fall: 15 credits	Total Spring: 15 credits	Total Summer: 3 credits
Total credit hours - 33			

Full-Time Students in MS in Biostatistics with Concentration in Clinical Research and Biostatistics

Year	Fall Semester	Spring Semester	Summer Semester
Year 1	BIOS 531 Clinical Epidemiology (3)	BIOS 602 Analysis of Biomedical Data II (3)	Elective # 3 (3)
	BIOS 524 Biostatistical Computing (3)	BIOS 603 Biostatistical Consulting (1)	
	BIOS 601 Analysis of Biomedical Data I (3)	BIOS 606 Clinical Trials (3)	
	BIOS 603 Biostatistical Consulting (1)	BIOS 690 Biostatistical Research Seminar (1)	
	BIOS 690 Biostatistical Research Seminar (1)	BIOS 697 Directed Research in Biostatistics (1)	
	OVPR 601 Scientific Integrity (1)	BIOS 535 Behavioral Measurement (3)	
	Elective #1 (3)	Elective # 2 (3)	
	Total Fall: 15 credits	Total Spring: 15 credits	Total Summer: 3 credits
Total credit hours - 33			

Part-time Students in the MS in Biostatistics

Year	Fall Semester	Spring Semester	Summer Semester
Year 1	BIOS 512 Basic Mathematical Statistics (3)	BIOS 602 Analysis of Biomedical Data II (3)	Elective # 3 (3)
	BIOS 524 Biostatistical Computing (3)	BIOS 606 Clinical Trials (3)	
	BIOS 690 Biostatistical Research Seminar (1)	BIOS 690 Biostatistical Research Seminar (1)	
	Total Fall: 7 credits	Total Spring: 7 credits	Total Summer: 3 credits
Total Year 1: 17 credits			
Year 2	BIOS 601 Analysis of Biomedical Data I (3)	BIOS 647 Survival Analysis (3)	OVPR 601 Scientific Integrity (1)
	Elective #1 (3)	Elective # 2 (3)	BIOS 697 Directed Research in Biostatistics (1)
	BIOS 603 Biostatistical Consulting (1)		BIOS 603 Biostatistical Consulting (1)
	Total Fall: 7 credits	Total Spring: 6 credits	Total Summer: 3 credits
Total Year 2: 16 credits			
Total credit hours - 33			

Appendix B: Course Descriptions

Description of Required Core Courses

BIOS 524. Biostatistical Computing. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Techniques for biostatistical computing are presented by way of contemporary statistical packages. Students learn how to create and manage computer data files. Methods for data entry, preparation of data for analysis and summative procedures are covered. Students learn the basics of random number generation and its applications, numerical methods for statistical algorithms, and concepts of numerical accuracy and stability. Advanced topics include interactive matrix and macro languages. Emphasis is placed on computational methods and data management rather than on statistical methods and procedures.

BIOS 601. Analysis of Biomedical Data I. 3 Hours.

Semester course; 3 lecture hours. 3 credits. This course provides an overview of the analysis of continuous response data. The material begins with a brief review of theoretical tools used in inference and segues into common univariate and bivariate statistical methodologies for the analysis of continuous response data. Model-based statistical methods including linear regression, ANOVA, ANCOVA and mixed-effect models will also be covered. Practical consideration and usage of statistical methods, utilizing commonly used statistical software packages, will be emphasized over theoretical underpinnings of the methods.

BIOS 602. Analysis of Biomedical Data II. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisite: **BIOS 601**. This course provides an overview of the analysis of categorical data. The course begins with a brief review of commonly used probability distributions for binary, ordinal, count and time-to-event measurements, then segues into chi-square and tabular testing. Model-based statistical methods including logistic regression, Poisson regression, log-linear modeling and survival analysis will be covered. Practical consideration and usage of statistical methods, utilizing commonly used software packages, will be emphasized over the theoretical underpinnings of the methods.

BIOS 603. Biostatistical Consulting. 1 Hour.

Semester course; 1 lecture hour. 1 credit. The principles dealing with the basic art and concepts of consulting in biostatistics. The nonstatistical course discusses the roles and responsibilities of biostatisticians, building relationships with collaborators, communicating results to various audiences, and other topics contributing to the professional development of biostatisticians.

BIOS 606. Clinical Trials. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Concepts of data management and statistical design and analysis in single-center and multicenter clinical trials. Data management topics include the collection, edition and validation of data. Statistical design topics include randomization, stratification, blinding, placebo- and active-control groups, parallel and crossover designs, and power and sample size calculations. Statistical analysis topics include sequential and group sequential methods.

BIOS 690. Biostatistical Research Seminar. 1 Hour.

Semester course; 1 lecture hour. 1 credit. Talks by the students, faculty, and visitors describing recent research or reviewing topics of mutual interest.

BIOS 697. Directed Research in Biostatistics. 1-15 Hours.

Semester course; 1-15 credits. Research leading to the M.S. or Ph.D. degree and elective research projects for other students.

OVPR 601. Scientific Integrity. 1 Hour.

Semester course; 1 lecture hour. 1 credit. A survey of contemporary issues relating to responsible conduct in research. Topics include academic integrity, mentoring, authorship and peer review, use of humans and animals in biomedical research, ownership of data, intellectual property, conflict of interest, scientific record keeping, collaborative research, research misconduct, and genetic technology. Graded as pass/fail.

Description of Restricted Elective Courses for MS in Biostatistics

BIOS 631. Mixed Models and Longitudinal Data Analysis. 4 Hours.

Semester course; 4 lecture hours. 4 credits. Prerequisites: **BIOS/STAT 514** and **654**. Introduction to longitudinal data structures and statistical inference. Multivariate theory and applications of normal mixed models, generalized linear mixed models, mixed models for categorical data, nonlinear mixed models and multiple imputation methods for missing data.

BIOS 647. Survival Analysis. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisites: **BIOS 514** and **654** or permission of instructor. The analysis of survival (or failure time) data, with/without censoring. Actuarial and life-table methods, nonparametric and parametric estimation of survival functions, and comparison of survival curves; regression methods, such as the Cox proportional hazards model; competing risks; sequential models; applications to clinical trials.

BIOS 660. Sequential Analysis and Advanced Design and Analysis of Clinical Trials. 3 Hours.

3 lecture hours. 3 credits. Prerequisites: **BIOS 514** and **654**. Sequential methods versus fixed sample methods; the sequential probability ratio test with extensions and modifications; some applications of Cox's theorem; overview of analysis of clinical trials; closed and truncated tests; group sequential tests in clinical trials; sequential monitoring; sequential estimation; other topics with emphasis in clinical trials.

Description of Restricted Elective Courses for MS in Biostatistics with a Concentration in Genomic Biostatistics

BIOS 632. Multivariate Analysis. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisites: **BIOS/STAT 514** and **554**. One- and two-sample multivariate tests; invariance: MANOVA, MANCOVA and multiple design models; nonparametric methods; inference with covariance matrices; principal components; factor analysis; discriminate analysis; clustering.

BIOS 667. Statistical Learning and Data Mining. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisites: **BIOS 514, 524 and 554**. Provides a detailed overview of statistical methods used to discover the underlying structure of large complex datasets. Specific topics will include discrimination analysis, k-nearest neighbors, naive Bayes classifiers, classification and regression trees, ensemble methods, random forests, L1 penalized models, bootstrap and cross-validation methods. The course includes hands-on experience using statistical software for each method.

BIOS 668. Statistical Methods for High-throughput Genomic Data II. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisite: **BIOS 658**. A continuation of **BIOS 658** that will introduce methods of additional high-throughput genomic assays, including comparative genomic hybridization for copy number change analysis and next generation sequencing methods. Methods that will be addressed include issues in mapping reads, variability in representation of sequences, normalization of raw count data, ChIP-Seq analysis, and RNA-Seq analysis.

Description of Restricted Elective Courses for MS in Biostatistics with a Concentration in Clinical Research and Biostatistics

BIOS 535. Behavioral Measurement. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Introduces theories and applications of the development and evaluation of measures and tests in the social and behavioral sciences. Classical test theory and item response theory are covered, including the topics of reliability, validity, item and test development, testing biases and standardization of tests. Students will gain experience applying methods in commonly used statistical packages.

BIOS 549. Spatial Data Analysis. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisites: **BIOS 543 and BIOS 544** or permission of instructor. Introduces students to spatial data and the statistical methods to appropriately analyze them. Covers spatial data visualization and manipulation, spatial point pattern analysis, interpolation and geostatistics for point-referenced data, and spatial regression modeling of areal data. Includes the use of a statistical software package for data analysis.

BIOS 635. Structural Equation Modeling. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisites: two graduate-level statistics courses or permission of instructor. This course provides an overview of the principals and applications of the general statistical framework structural equation modeling. The course provides an introduction to the concepts, methods, problems and applications of SEM. Topics covered include the modeling of observed variables, consequences of measurement error, modeling of latent variables and longitudinal structural equation models.

Description of Concentration and/or Focus Area Courses for MS in Biostatistics

BIOS 512. Basic Mathematical Statistics. 3 Hours.

Semester course; 3 lecture hours. 3 credits. The course builds the basics of probability theory and applications of probability theory toward statistical inference. Students will learn about the

mathematical paradigm behind most statistical inference used in basic data analysis, estimation and hypothesis testing.

BIOS 513. Mathematical Statistics I. 3 Hours.

Continuous course; 3 lecture hours. 3 credits. Prerequisite: **MATH 307**. Probability, random variables and their properties, distributions, moment generating functions, limit theorems, estimators and their properties; Neyman-Pearson and likelihood ratio criteria for testing hypotheses. Crosslisted as: **STAT 513**.

Description of Concentration and/or Focus Area Courses for MS in Biostatistics with a Concentration in Genomic Biostatistics

BIOL 540. Fundamentals of Molecular Genetics. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisite: **BIOL 310** or consent of instructor. The basic principles and methodologies of molecular biology and genetics are applied to genome organization, replication, expression, regulation, mutation and reorganization. Emphasis will be placed on a broad introduction to and integration of important topics in prokaryotic and eukaryotic systems. Crosslisted as: **BNFO 540**.

BIOS 658. Statistical Methods for High-throughput Genomics Data I. 3 Hours.

Semester course; 3 lecture hours. 3 credits. Prerequisites: **BIOS 524**; and **BIOS 544** or **BIOS 654**. Provides a detailed overview of all aspects pertaining to the preprocessing and analysis of data from high-throughput genomic experiments, such as normalization techniques, expression summaries, quality control assessments and data reduction methods. Presents strategies for class and identification of important molecular features. Includes hands-on experience using statistical software for processing and analyzing genomic data.

Description of Concentration and/or Focus Area Courses for MS in Biostatistics with a Concentration in Clinical Research and Biostatistics

BIOS 531. Clinical Epidemiology. 3 Hours.

Semester course; 3 lecture hours. 3 credits. This course is intended primarily for clinicians. Permission of the course coordinator is required for others interested in registering. Epidemiological concepts necessary for evidence based studies of medicine. Specific topics will include: cause and effect criteria, demographic rates, measures of association or effect, study designs, decision trees, meta-analysis, evaluation of the literature, sources of data, reliability and validity, bias, confounding and effect modification, screening and diagnostic tests, sensitivity, specificity, false positives, false negatives, applications of the above to diagnosis and treatment, treatment efficacy and improved patient care.

Appendix C: List of programs at VCU SCHEV Peer Institutions

Total credit hours for the degree program.

Peer Institutions	Credit hours
Boston University M.S. in Biostatistics	32
Drexel University M.S. in Neuroscience	41
The Ohio State University M.S. in Biostatistics	45
University of Buffalo M.A. in Biostatistics	30
University of Buffalo M.S. in Bioinformatics and Biostatistics	36
University of Alabama M.S. in Biostatistics	45
University of Arizona M.S. in Biostatistics	39
University of Cincinnati M.S. in Biostatistics	30
University of Illinois at Chicago M.S. in Biostatistics	48
University of Iowa M.S. in Biostatistics	38
University of Kansas M.S. in Biostatistics	36
University of Louisville M.S. in Biostatistics	33
University of Miami M.S. in Biostatistics	33
University of Minnesota M.S. in Biostatistics	33
University of Nevada, Reno M.S. in Biostatistics	36
University of Southern California M.S. in Biostatistics	39
University of Utah Master of Statistics in Biostatistics (MSTAT)	34
West Virginia University M.S. in Biostatistics	35

Table of Contents

Institution	1
Nature of Proposed Change	1
Background	1
Purpose of Proposed Change	1
Mission.....	2
Rationale for Proposed Change	2
Academic Programs	2
Resources/Budget	2
Administration.....	2
Faculty.....	3
Graduate Assistants	3
Space	3
Other Costs.....	3
Miscellaneous.....	3
Budget	4
Appendix.....	5
Appendix A: Current Organizational Structure	A-1
Appendix B: Proposed Organizational Structure.....	B-1
Appendix C: Organizational Structure of the Proposed Center.....	C-1

Institution

Virginia Commonwealth University

Nature of Proposed Change

Virginia Commonwealth University (VCU) requests approval to establish the Center for Biological Data Science within VCU Life Sciences.

Appendix A presents the existing organizational structure of VCU Life Sciences.

Appendix B presents the organizational structure of VCU Life Sciences after the addition of the Center for Biological Data Science.

Background

The Center for the Study of Biological Complexity was initially established as a chartered research entity within VCU Life Sciences in 2001. In July 2003, the State Council of Higher Education for Virginia (SCHEV) approved the transformation of VCU Life Sciences into a formal academic and instructional unit. From that time, VCU Life Sciences housed two chartered university centers responsible for the oversight of both research and academic curricula in environmental studies and bioinformatics; the Center for the Study of Biological Complexity was one of these centers.

In 2017-2018, a national search hired a new director for the center. With this new leadership and vision in the center, it has become clear that the focus of the center has drifted from its original mission, and that the current name fails to capture the present state of its research and training. Faculty and administration in VCU Life Sciences held meetings to discuss the potential name change of the unit. Feedback was solicited from a range of stakeholders, both inside and outside of the unit, including faculty, staff, students, and administrators at numerous schools and colleges within VCU, and representatives from local government and industry. There was unanimous agreement in support of a name change. The new name was chosen to be the Center for Biological Data Science.

In 2019-2020, while following the separate processes for formally changing the name of both research units and academic units, VCU discovered that the establishment of VCU Life Sciences as an academic unit equivalent to a college or school in 2003 by SCHEV did not *de facto* also establish the Center for the Study of Biological Complexity within VCU Life Sciences as an academic unit equivalent to a department at that same time. As VCU was unaware of this subtlety in 2003, the Center for the Study of Biological Complexity has been acting as an academic unit for 17 years, with direct oversight and responsibility for the B.S. and M.S. degrees in Bioinformatics.

Purpose of Proposed Change

The purpose of the proposed organizational change is to establish the Center for Biological Data Science as an academic unit responsible for the administration and oversight of the bioinformatics academic programs at Virginia Commonwealth University.

Mission

The proposed organizational changes aligns with the institution's mission of Virginia Commonwealth University by providing "an engaged, learner-centered environment that fosters equity, discovery, and innovation." The proposed center supports the institutions mission to offer "interdisciplinary collaborations that bring new perspectives to complex problems and mobilize creative energies that advance innovation." The center will serve as an "innovative" center for bioinformatics and biological data science.

Rationale for Proposed Change

The center has served as the unit responsible for the organization and running of the bioinformatics degree programs at VCU for 17 years. The purpose of the proposed change is to establish the proposed center as an academic unit responsible for overseeing academic curricula in bioinformatics. The proposed Center for Biological Data Science will continue to support bioinformatics programming at the institution. *Biological Data Science* is a new and more forward-looking term than related older terms such as *Computational Biology*, *Biostatistics*, *Biological Informatics*, or *Bioinformatics*, and can be viewed as encompassing each of these in some form (as well as other related informatics disciplines such as ecoinformatics, phyloinformatics, and biodiversity informatics), without carrying the historical baggage associated with these other names. Biological Data Science encompasses all of biology and the life sciences, not just the molecular or genetic subdisciplines, with which "informatics" is largely associated. Bioinformatics is a cutting-edge, multidisciplinary degree program that combines biology, computer science, and statistics into a single, cohesive field of study. Bioinformatics is a high demand field, reflected by a 33% increase in majors over the last six years.

Academic Programs

The proposed center will continue to administer the Bachelor of Science (B.S.) in Bioinformatics and the Master of Science (M.S.) in Bioinformatics. The center also will provide general education courses that serve the entire VCU student body.

Resources/Budget

The center will include the same reporting and financial support as other departments in VCU Life Sciences. The center's budget will be made available through VCU Life Sciences. Faculty salaries are administered through VCU Life Sciences. As the center has been established as a chartered research unit for 19 years and has been functionally acting as an academic unit for 17 years, no additional resources are required.

Administration

The center will provide the requisite infrastructure for and serve as the home unit for the bioinformatics programs. The center is led by a director with responsibilities equivalent to a department chair. Because the director will maintain the same position and authority, there will not be an increase of their existing salary of \$147,000 and benefits of \$60,417.

The center employs an academic advisor to oversee undergraduate students in the Bioinformatics degree program. The academic advisor has an annual salary of \$44,000, with fringe benefits of \$18,084.

Additional administrative needs (e.g., HR support) are met through VCU Life Sciences directly and are not part of the center budget.

Appendices A and B presents the existing and proposed organizational structure of VCU Life Sciences.

Faculty

The center serves as the home unit for six (6) full-time tenured, tenure-track, and term faculty whose academic responsibilities are focused on the bioinformatics degree programs, as well as two (2) faculty with joint positions in other units at VCU to foster research and academic bridges across a wide variety of disciplines. The faculty salaries total \$580,642 and fringe benefits total \$239,350.

Graduate Assistants

Funding for graduate assistants is not provided by the center.

Space

At present, there is adequate space to accommodate the proposed center. The center currently occupies approximately half of the third floor of Grace E. Harris Hall on the Monroe Park Campus. The space includes eight (8) faculty offices; the director's office; the academic advisor's office; a swing office used for visiting scholars, postdocs, or students; a small conference room; a general utility room; a small copier/mail/storage room; and a computer classroom/lab used explicitly by the Bioinformatics undergraduate and graduate programs. All offices and laboratory spaces are equipped with furniture. No additional telecommunications or computer equipment will be needed. No additional space related costs are required.

Other Costs

Other costs included in the annual budget for the Center for Biological Data Science include:

Office supplies	\$7,000
Instructional supplies	\$25,000
Travel	\$5,000
Marketing	\$3,000
Conferences/Professional Development	\$5,000
Total	\$45,000

Miscellaneous

No additional expenditures are needed to establish the center as an academic unit as the infrastructure is already completely in place. Although the establishment of the center as an academic unit includes a name change, there are essentially no costs associated with this change. There are no costs associated with changes to the website, signage, or printed letterhead or stationery. Marketing costs are already a standard line item in the annual budget.

Signage	\$0,000.00
Printed materials (stationery, letterhead, etc.)	\$0,000.00

Website	\$0,000.00
Publicity and promotion	\$0,000.00
Total	\$0,000.00

Sustainability

The center is an existing research unit fully integrated into the University structure for 20 years. Resources to support the center will continue to be funded by VCU Life Sciences. Virginia Commonwealth University and VCU Life Sciences have adequate and sufficient resources to operate the proposed center. No new resources will be requested from the state to establish or maintain the proposed organizational change for the center.

Budget

The center budget lists expected expenditures for the next three years and includes a fixed 2% increase per year for inflation. Miscellaneous costs that do not have a designated line item in the budget form are included in the line for “Other Costs”. None of these are new costs, as the center has been operating for almost 20 years.

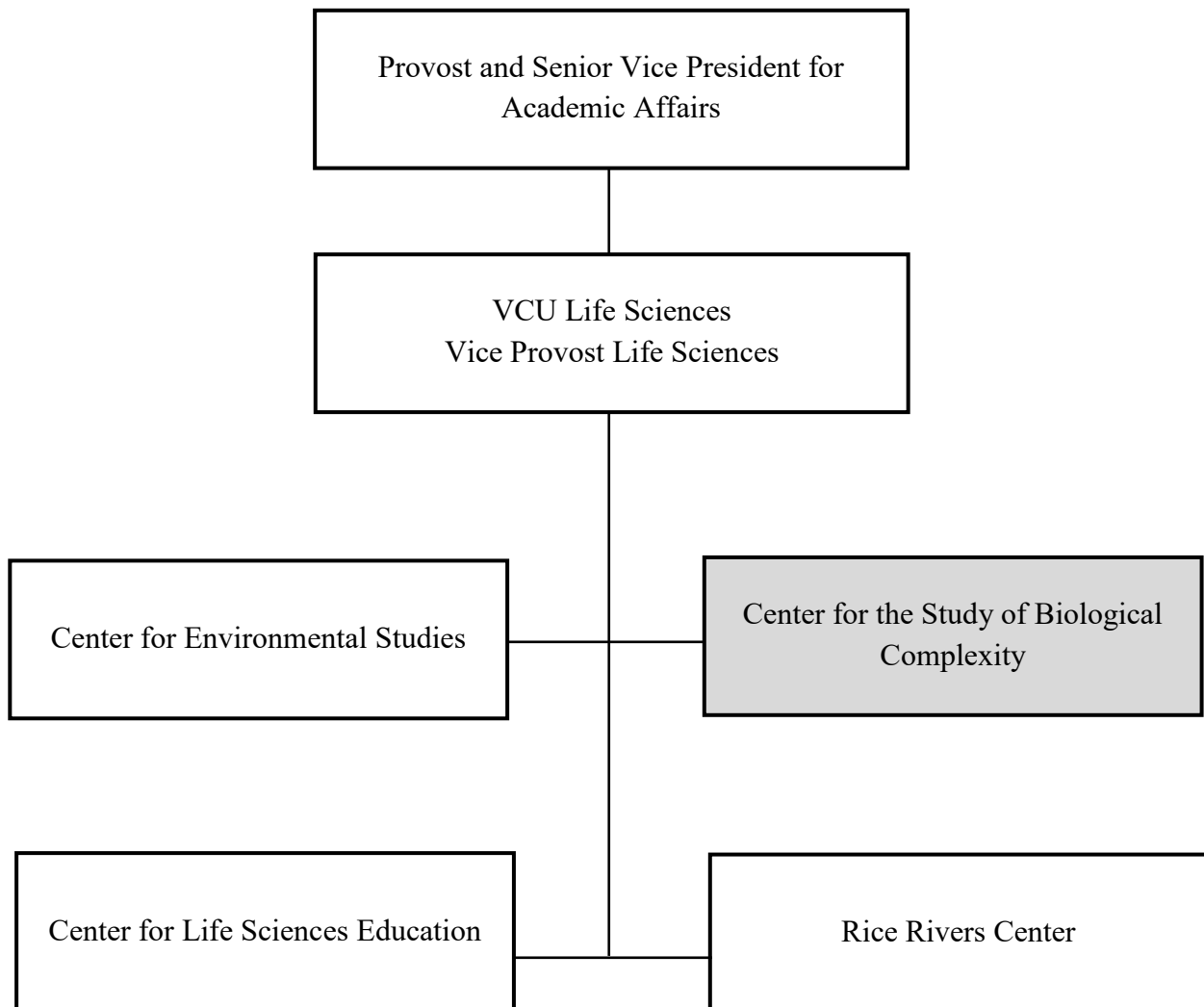
New Academic Unit - Establish and Operate

Proposed Name: Center for Biological Data Science

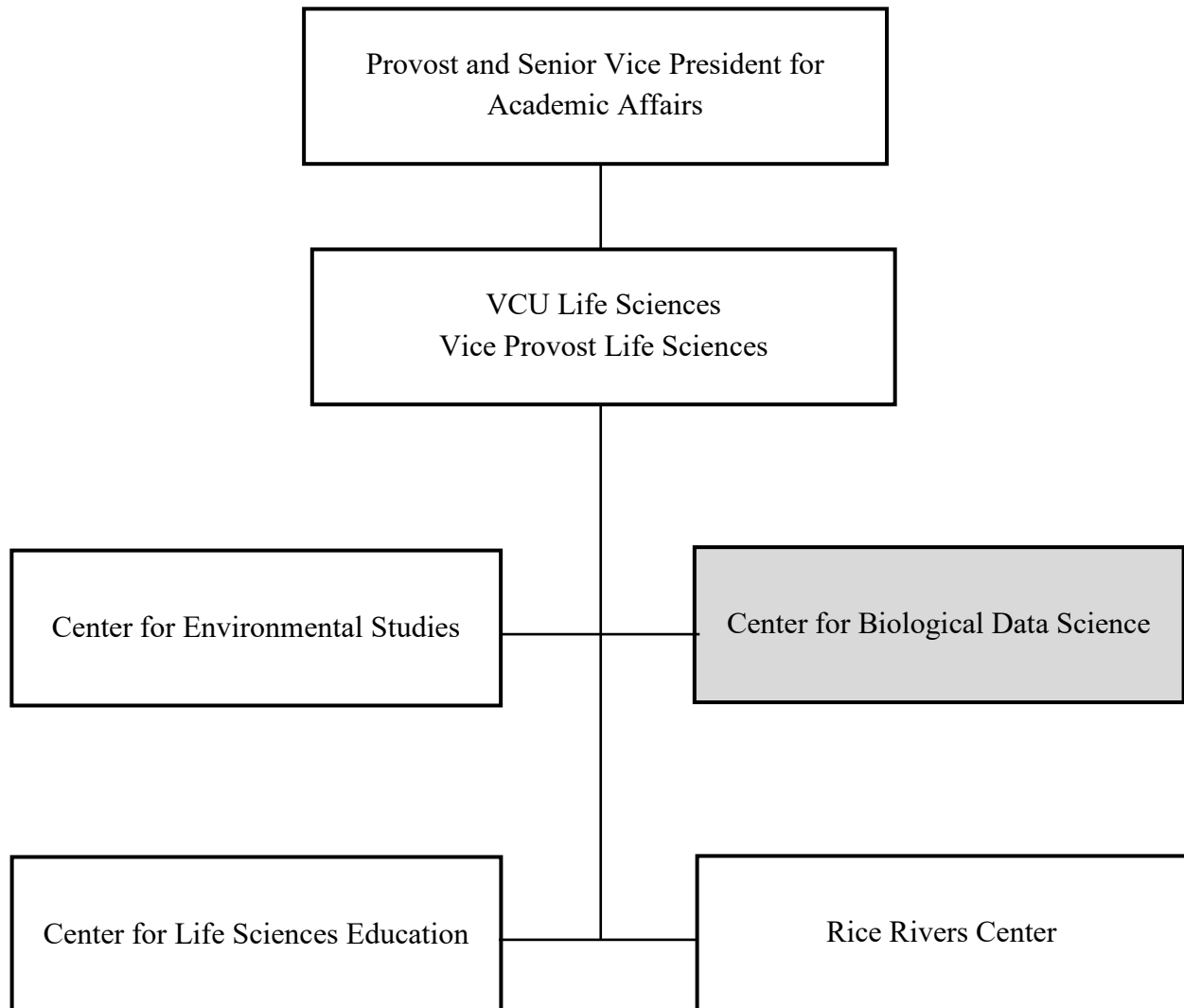
Expenditure Category	Proposed Budget			
	HDCT	2020 - 2021	2021 - 2022	2022 - 2023
Personnel Salary				
Director	1	\$147,000	\$149,940	\$152,939
fringe Benefits		\$60,417	\$61,625	\$62,858
Associate Professor	4	\$285,027	\$290,728	\$296,542
Fringe Benefits		\$117,852	\$120,209	\$122,613
Assistant Professor	4	\$295,615	\$301,527	\$307,558
Fringe Benefits		\$121,498	\$123,928	\$126,407
Academic Advisor	1	\$44,000	\$44,880	\$45,778
Fringe Benefits		\$18,084	\$18,446	\$18,815
Faculty				
Fringe Benefits				
Personnel Subtotal	10	\$1,089,493	\$1,111,283	\$1,133,510
Student Support				
Student HelpersWorkers				
Graduate Teaching Assistant				
Graduate Research Assistant				
Student Support Subtotal	0	\$0	\$0	\$0
Operating Expenses				
Office Supplies		\$7,000	\$7,140	\$7,283
Instructional Supplies		\$25,000	\$25,500	\$26,010
Travel		\$5,000	\$5,100	\$5,202
Marketing		\$3,000	\$3,060	\$3,121
Conference/Professional Development		\$5,000	\$5,100	\$5,202
Other Costs				
Operating Expenses Subtotal		\$45,000	\$45,900	\$46,818
Total	10	\$1,134,493	\$1,157,183	\$1,180,328

Appendix

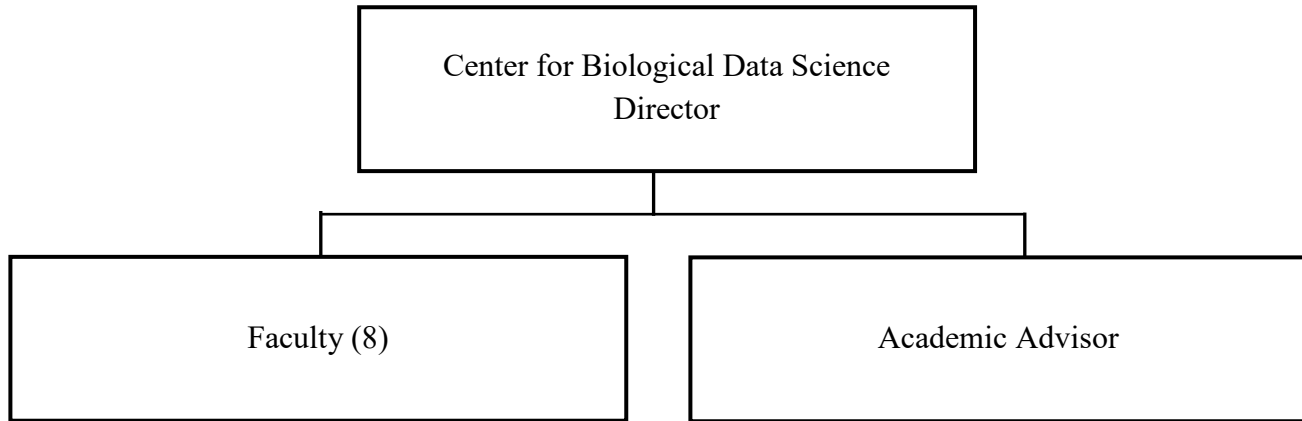
Appendix A: Current Organizational Structure

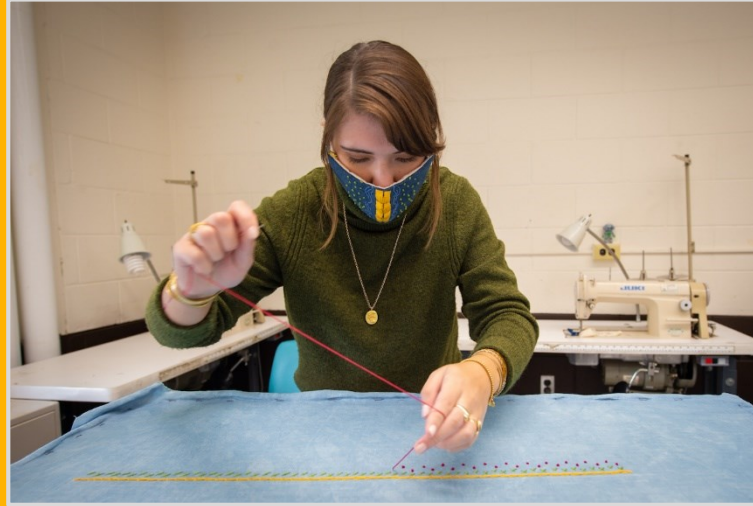


Appendix B: Proposed Organizational Structure



Appendix C: Organizational Structure of the Proposed Center





Provost Report

VCU Board of Visitors
Academic and Health Affairs Committee

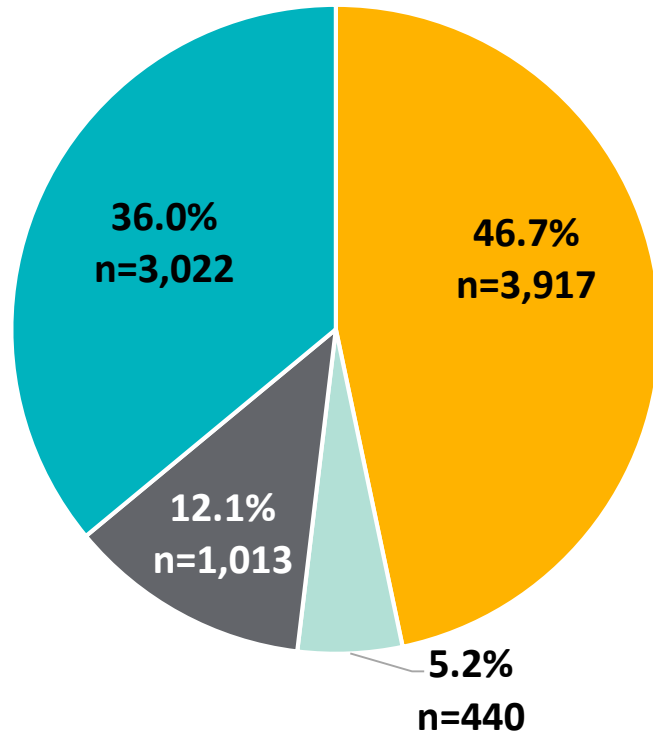
Dec 11, 2020

Gail Hackett, Ph.D.

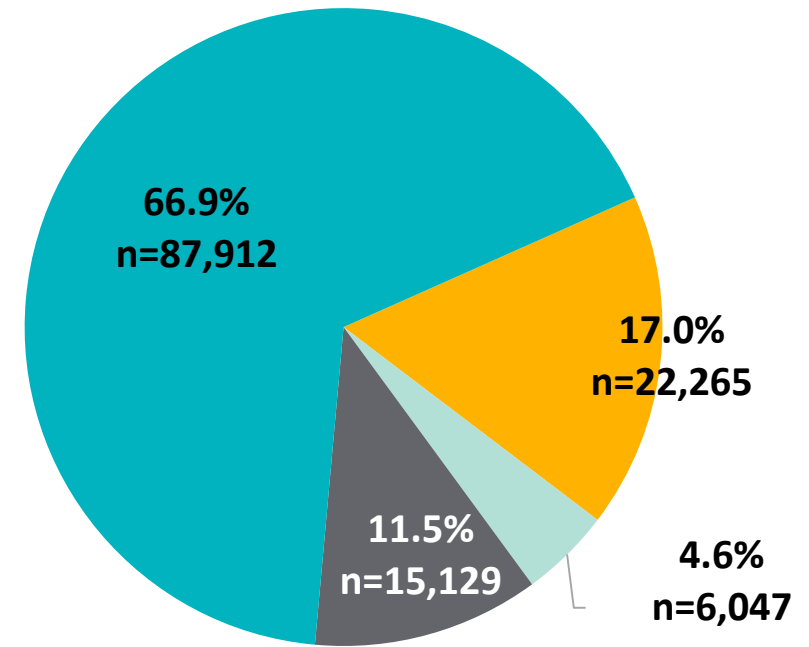
Provost and Senior Vice President for Academic Affairs

Fall 2020 Course Sections by Modality and Enrollment

Total Sections = 8,392



Total Course Enrollment = 131,353

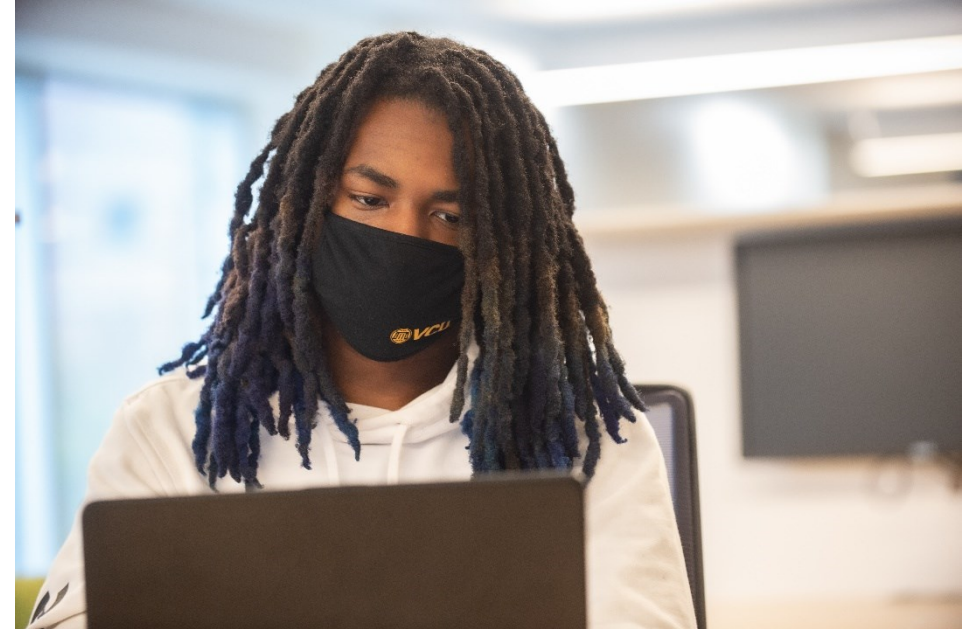


■ In Person ■ Online ■ Hybrid ■ Blended

Student Sentiments of Online/Remote Instruction

Not surprisingly, some VCU students reported less favorable experiences

- Freshmen and sophomore students
- First-generation
 - First-generation students living on-campus reported much more favorable experiences with online / remote instruction
- Pell-eligible
 - Pell-eligible students living on-campus reported slightly more favorable sentiment than those living off-campus



Student perceptions about online/remote instruction appeared relatively consistent and favorable across racial/ethnic groups and gender.

CA 2020-06, September 28, 2020

VCU faculty have displayed flexibility and compassion for students during this difficult semester

Early alerts and midterm grades provided meaningful advising interactions to better support and guide students.



Early Alerts

- 5,732 early alerts provided to students

Midterm Grades

- 78,469 midterm grades submitted in fall 2020
- 82.2% of undergraduate courses provided midterm grades – the highest submission rate in VCU history!

Faculty Experience: Flexibility and Compassion

Faculty demonstrated flexibility in quickly learning a new Learning Management System as VCU transitions from the use of Blackboard to Canvas.

For Fall 2020 courses were delivered via:

- Blackboard – **30%** of all sections
- Canvas- **70%** of all sections



Pursuing Excellence in the Pandemic

- Faculty continued to work hard on curriculum reform. In Fall 2020, all **70 undergraduate degree programs** curriculum were revised in preparation of the new general education requirements (a total of 170 Bulletin program pages). *Revision made after the board meeting.*
- Faculty continued to prepare for **academic program review** (28 programs currently in some stage of the review). *Revision made after the board meeting.*
- 640 faculty have participated in one of the **writing retreats or writing workshops** in Fall 2020 sponsored by the Center for Teaching and Learning Excellence.
- Website resources were created and faculty development sessions were held to help faculty prepare for the **Fall 2020 political elections**.
- Website resources were created and faculty development sessions were held to help faculty develop **antiracism curriculum** and develop **culturally relevant pedagogy**.
- **Faculty development and celebrations moved online**: new faculty orientation, training program for new department chairs, training program for new deans, monthly Faculty Club, Promotion and Tenure Celebration (recognizing 182 promoted/tenured faculty members), monthly professional development sessions for department chairs,
- 64 VCU faculty and staff enrolled in the **Recruitment Inclusive Champions training program** designed to provide guidance to search committees for hiring a talented and diverse faculty.

A different student experience but just as valuable



A different student experience but just as valuable

Weeks of Welcome

(first four weeks of the semester)

- 116 events
- Events intended to 89% overall satisfaction rating
- Survey respondents reported higher levels of a sense of belonging and community as a result of attending events

Recreation Sports

- 69,040 visits
 - 5,277 unique visitors
- Outdoor Adventure Trips: 105 participants
- Virtual Escape Room program- 108 participants
- Group Exercise Program - 789 participants
- eSports - 95 participants
- Intramurals (in person) 298 participants

Leadership Development

- Leaders UnLeashed Conference, a one-day leadership conference hosted by VCU LEAD.
 - 159 participants
- “ “The conference as a whole was really valuable. Since COVID has started, I have not felt connected with a large group of people until this conference.” - *Caleb Rivera*

“The Well”

Health Promotion and Well-Being Center

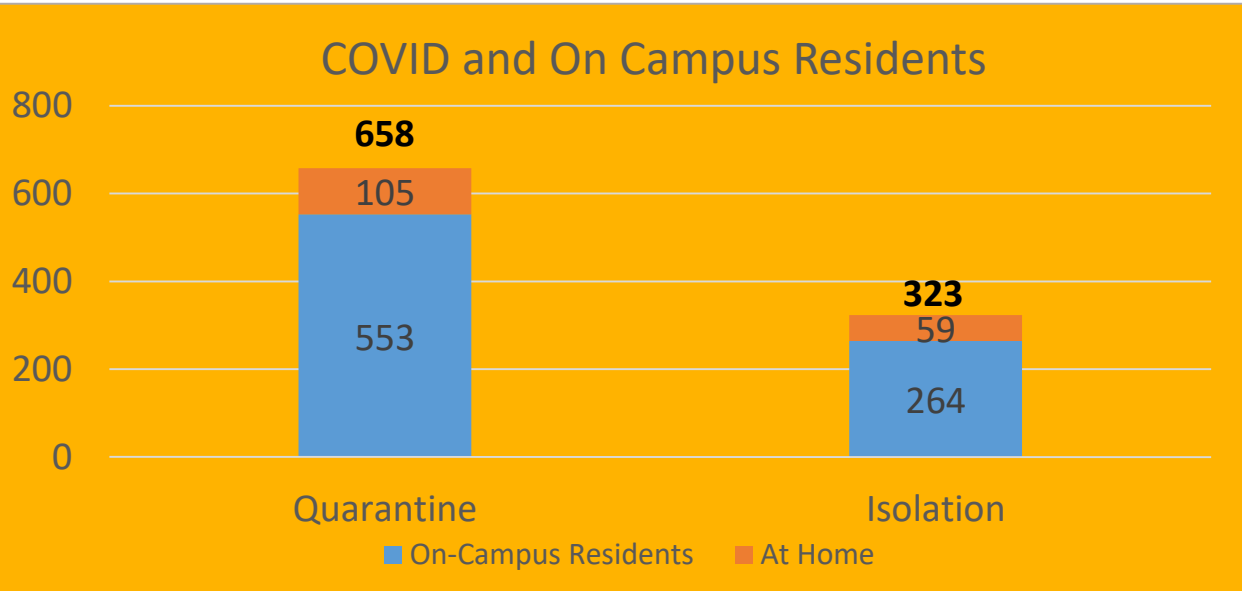
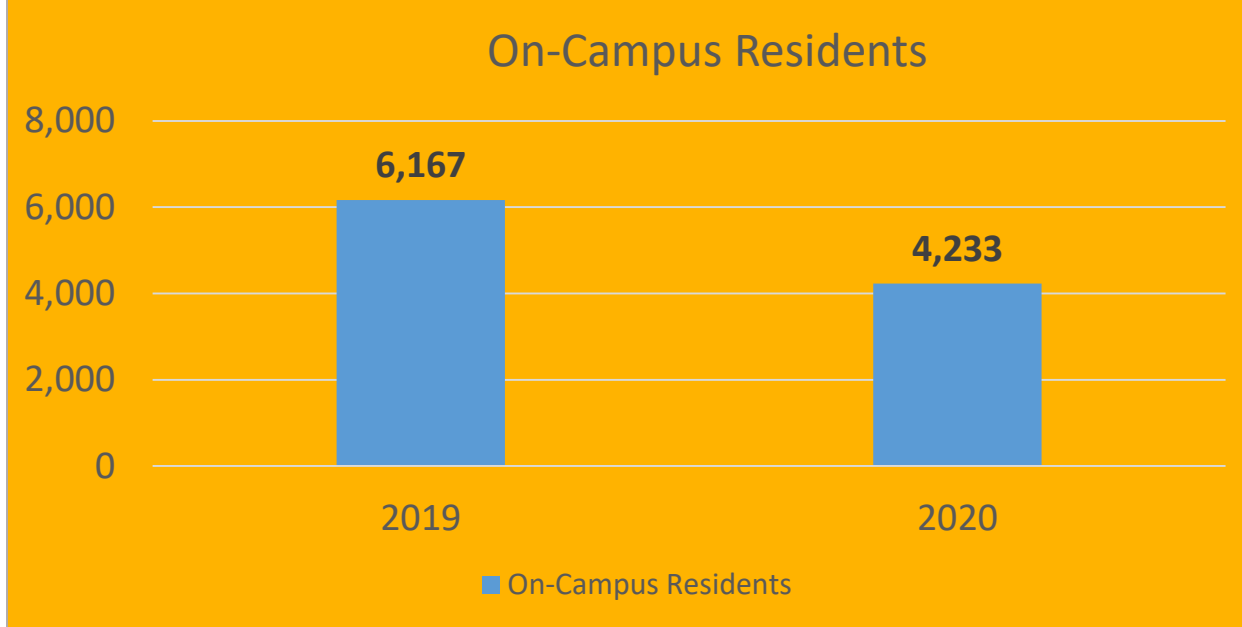
- Podcasts
- Delivery of 397 Very Caring University COVID Care Kits to students in isolation/quarantine
- Development of Very Caring University COVID-19 Learning Module for COVID violations
 - 214 students
- Guided meditations and mindfulness stress reduction programs offered

Residential Experience



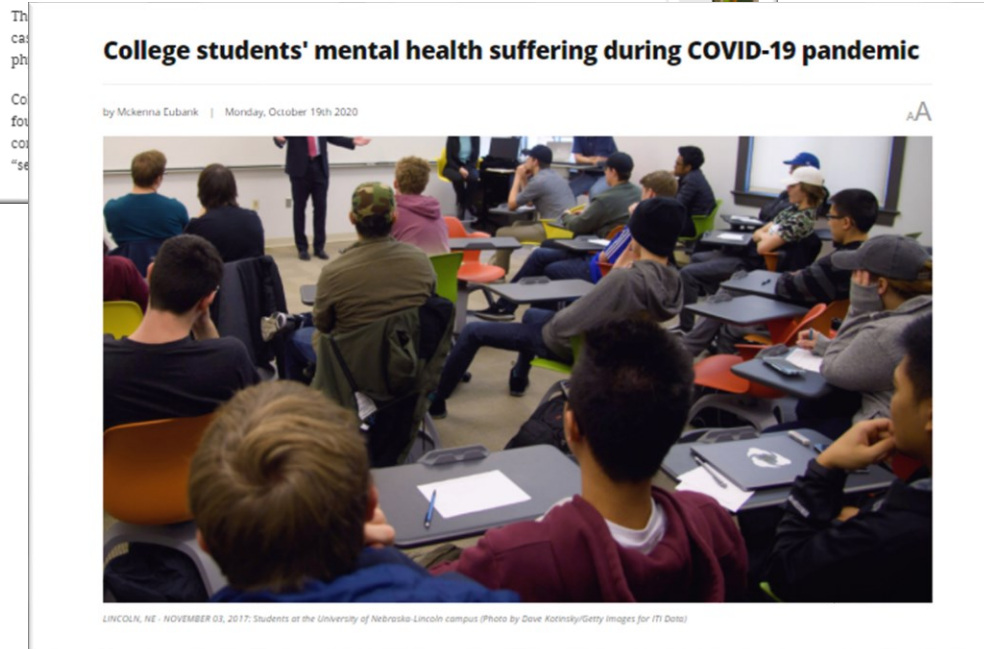
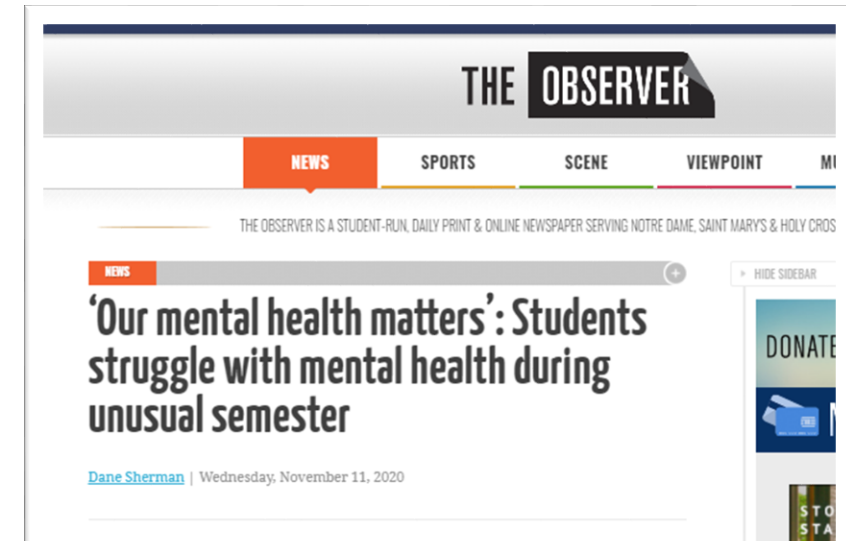
Would like to applaud VCU 🧡🖤. My daughter was tested for Covid yesterday, had to spend the day and night in isolation. Her results came back negative this morning, thankfully. Thank you to VCU health services that tested her, the staff that helped her gather the things she would need for a possible quarantine, and the food service group. FaceTimed with her last night. GRC III looked really clean, and the food looked pretty good. It's also great how they were attentive to her roommates.

- From Parent Facebook Page post



Student mental health continues to be of great concern

- Anxiety and stress presented as top concerns
- University Counseling sees students within week of request for assistance
 - 3,857 attended overall appointments
 - Individual appointments up 15%
 - Crisis appointments down 87%
 - Offer COVID support groups
- Faculty supported flexible new policies and guidelines for Fall 2020



Other Actions Taken to Support Students' Mental Health and Success

Faculty supported flexible new policies and guidelines for Fall 2020

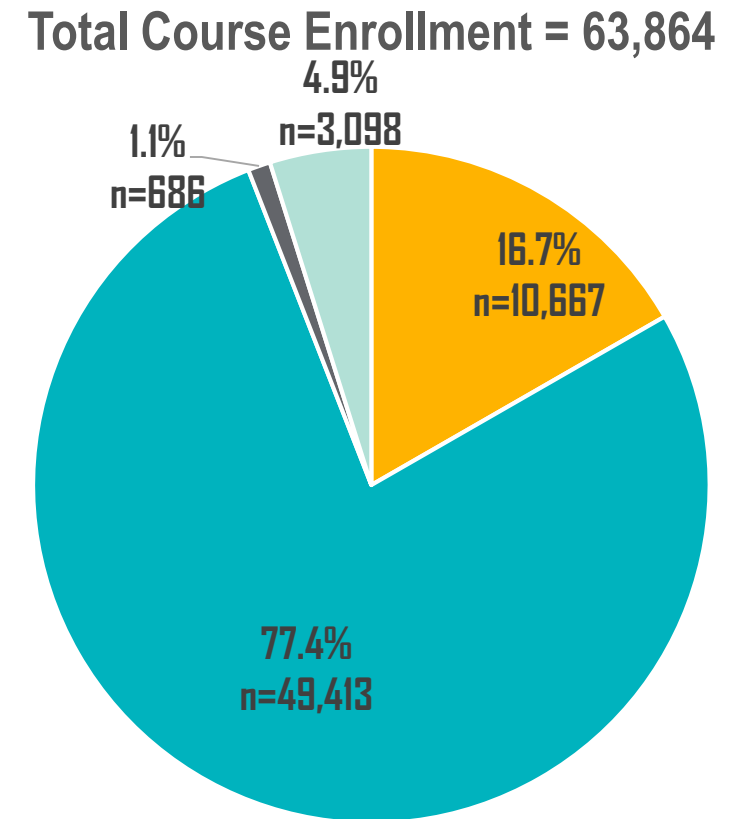
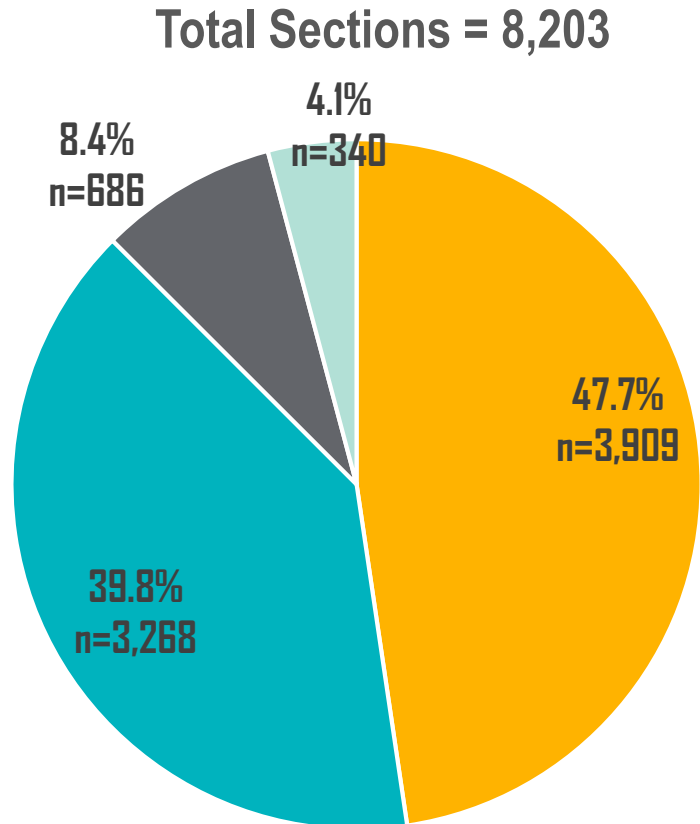
- Revised academic calendar with truncated semester and short final exam week
- Extension of course withdrawal period
- Revised pass/fail grading policy
- New student absence guidelines
- Alternative course evaluation questions
- Final Exams 3 in 24 accommodation – new final exams guidelines
- Temporary suspension of academic standing for struggling students

Regular communication to faculty and students

Spring 2021 Expectations and Plans

- Academic Calendar Adjustments
 - Delayed first day of class: Jan 25
 - Spring break eliminated
 - Several reading days added
- Continue to improve quality of online courses
 - Faculty development/workshops
- Instructional Flexibility
 - anticipating impact of COVID surge

Spring 2021 Course Sections by Modality and Enrollment



In Person Online Hybrid Blended

ATTACHMENT D

Senior VP Report

Arthur Kellermann, MD

Senior VP, VCU Health Sciences and
CEO, VCU Health System



Vision for VCU Health

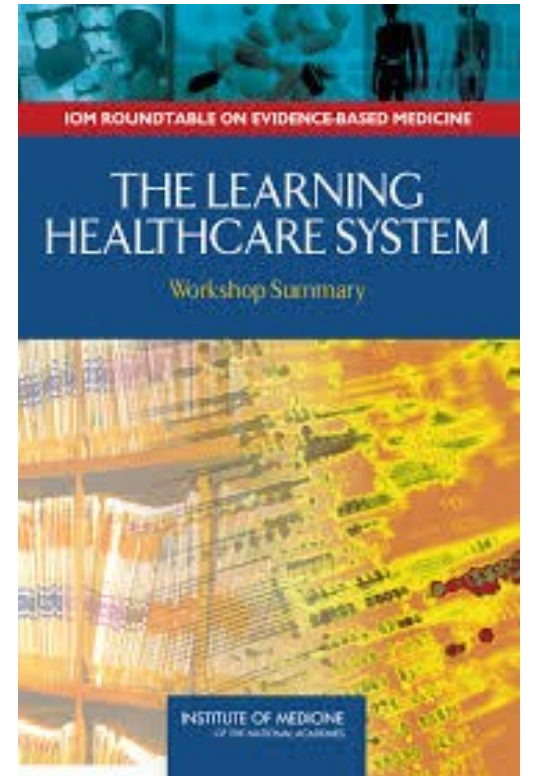


VCU Health is transforming itself from a “Teaching Hospital” into a “Learning Health Care System”

In a learning health system, “...*science, informatics, incentives, and culture are aligned for continuous improvement and innovation, with best practices seamlessly embedded in the delivery process and new knowledge captured as an integral by-product of the delivery experience*” [Emphasis added]

National Academy of Medicine

<https://nam.edu/programs/value-science-driven-health-care/learning-health-system-series/>



Out of the Crucible

HOW THE US MILITARY TRANSFORMED COMBAT CASUALTY CARE IN
IRAQ AND AFGHANISTAN



During OEF/OIF, military medicine made enormous advances

TCCC

Bleeding control

Damage-control surgery

CCATTs for inter-continental evacuations

P.T.S. eval and Rx

Advanced rehab & prosthetics

“focused empiricism”





A vision worthy of a world-class university

- **Increase alignment** of the VCU health sciences schools and VCU Health to benefit both
- **Break down cultural barriers** to boost teamwork our integration with VCU's Monroe Park schools to enhance learning, research, innovation & patient care
- **Permanently transform** VCU Health into a "Learning Healthcare System"



Win4



One Team. One Fight.

onevcu

Thank you!

Questions?

VCU Career Readiness: A Holistic Model for Success

VCU Board of Visitors, December 2020

Gail Hackett, Ph.D.

Provost and Senior Vice President for Academic Affairs



"Colleges that embrace the [career readiness] challenge can help blunt the worst effects of disruptions and secure the economic future of millions of people and the nation as a whole."

Goldy Blumenstock, Career-Ready Education: What's Ahead

“Think of both the real experiential value and the marketability of a graduate who leaves college with a degree plus demonstrable long-term projects, real work experience and an industry-recognized credential. It’s a serious triple-threat that will dramatically improve the real and perceived value proposition of higher education for students, parents, employers and taxpayers. It will go a long way toward eliminating the greatest critique of higher education today which is the belief that graduates are not well prepared for the workplace.”

- Brandon Busteed, College Should Produce Triple-Threat Graduates, April 28, 2020, Forbes



Reflection Exercise

National Challenge to Career Readiness

- Existing barriers:
 - Information inequity
 - Financial insecurity
 - Disconnection between academic studies and knowledge of career options
- Barriers have a disproportionate impact on first-generation and Pell-eligible students.
- VCU has developed a holistic and innovative approach to addressing these barriers.



Degree-seeking undergraduates, Fall 2020

54%

Minority

32%

Pell-eligible

34%

First Generation
(incoming cohort only)

62%

Female


38%

Male

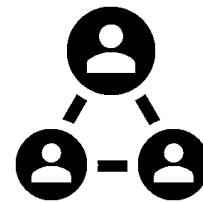
Source: Census 2 data. Excludes Qatar.

What do VCU students need to be career ready?


VCU students need a student-centered, holistic, customizable experience:



Brightly lit educational **pathways** connecting classroom experiences to career exploration.



Community invested in their success and a comprehensive experience that reinforces real-world skills valued by employers.

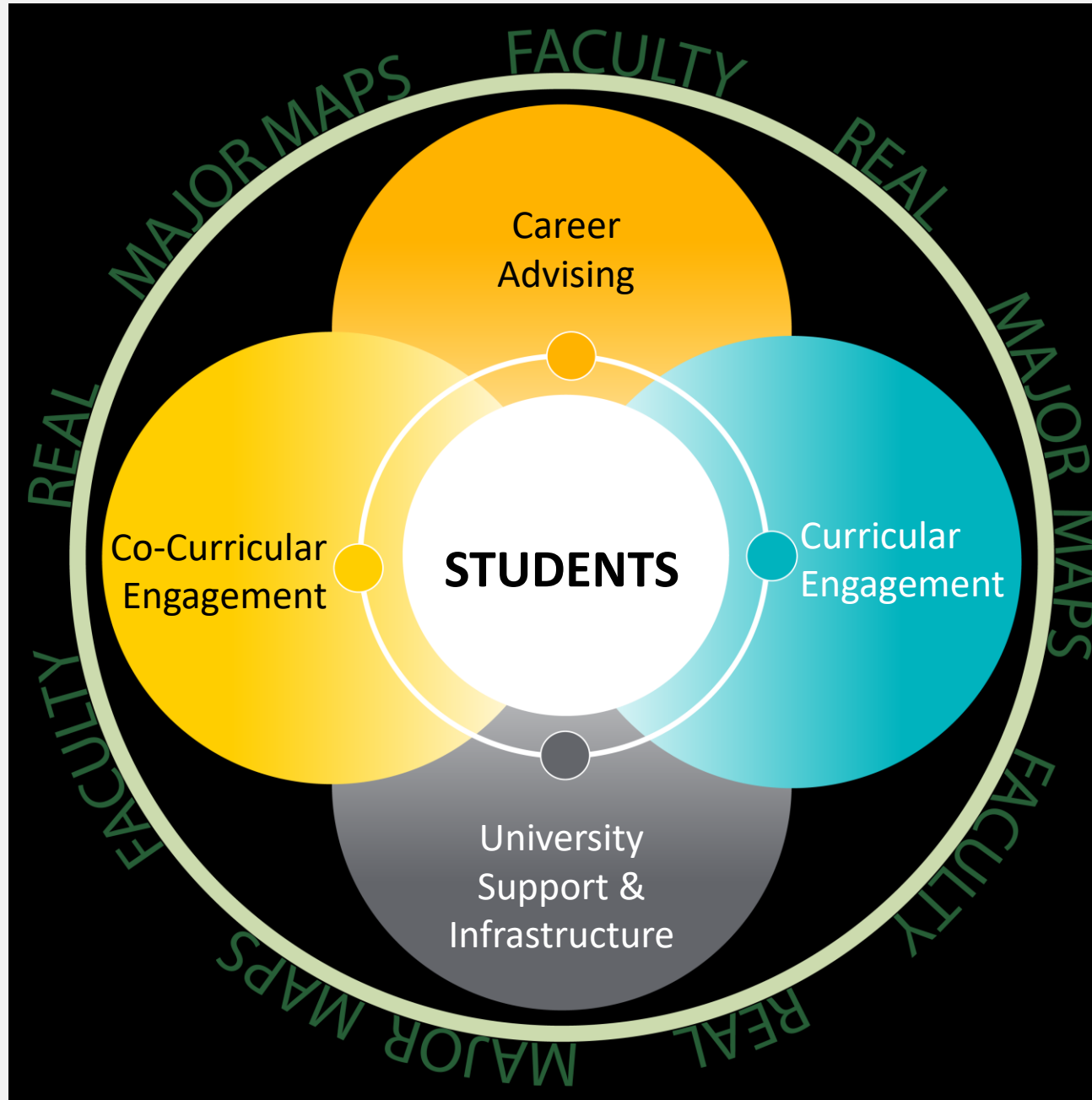


Campus **infrastructure** to support collaboration, innovations in programming, and analytics to develop new models for work-based learning.



Strategic action to address socio-economic disparities by providing **financial support** and building **social capital**.

VCU Career Readiness Model



CAREER ADVISING: Career exploration, major selection or change, job search or graduate program application support, training campus career champions (faculty/staff advisors)

CO-CURRICULAR ENGAGEMENT: Undergraduate research, study abroad, service learning, clubs and organizations, campus leadership and involvement, federal work-study

CURRICULAR ENGAGEMENT: Career development courses, internship courses, co-op, University College career minor

UNIVERSITY SUPPORT & INFRASTRUCTURE: REAL academic regulation, funding for experiential learning, data and resources on internships/experiential learning and graduate outcomes, administrative support structures, and career audit.

VCU's career readiness model is translating to full-time employment for grads

	Employed Full-time	Continuing Education	Still Seeking
VCU Undergraduates (May 2019, within six months of graduation)	53%	16%	19%
Undergraduates All R1 Institutions	51%	22%	15%
Undergraduates All Public Institutions	51%	19%	10%
Undergraduates Nationally	54%	19%	14%

VCU Career Readiness Priorities



REAL Experience

(internships, practicum, undergraduate research, study abroad, etc.)

REAL undergraduate graduation requirement was approved November 2020 and will be implemented in Fall 2021.



Outcomes survey

Increase participation rates from 54% to 65% and analyze employment at education level by May 2021. Improve placement outcomes (employed full-time and continuing education) to comparable to all R1 institutions by 2025.



Advising & Support

Launch first-of-its-kind career audit by 2023.



Major Maps

Automate for building plans by 2024.



Graduation

Reduce debt by 2025.

Achieve Career Readiness Priorities while Addressing Social and Economic Mobility

We must invest in the future so VCU students can invent their futures. To ensure all students have access and opportunity to cultivate the skills they need, **VCU needs targeted investments in:**

Bolstering initiatives with demonstrated impact, including student success courses, high impact practices, and lower career advisor to student ratios.

Providing funding to students who want and need to engage in internships and experiential learning but are unlikely to have access without direct support.

Developing new curricular learning models based on workforce demands, in partnership with faculty, community, and industry partners.

Measuring, monitoring, and promoting experiential learning and career readiness through set metrics, streamlined processes, and innovative systems.

Securing internal and external resources through leaning into our strengths as educational leaders in actively promoting diversity, equity, and inclusion.



Questions?





ATTACHMENT F

**Report to
Board of Visitors**
December 11, 2020

Dr. D'Arcy Mays, Faculty Athletics Representative
Chair, Department of Statistical Sciences and Operations Research
College of Humanities and Sciences

Academic Unit Eligibility Report

There are three ways for an institution to earn an Academic Unit, they must satisfy at least one of the following:

1. The Graduation Success Rate for the most recently available year is equal to or greater than 90% based on the single-year rate of all student-athletes at the individual level. The current cohort year is 2014-15.
2. The difference between the student-athlete and student body percentages in the most recently published Federal Graduation Rate is equal to or greater than 13 percentage points. The current cohort year is 2014-15.
3. Division I Academic Progress Rate (APR) for the previous year is equal to or greater than 985. Calculated as the average of single-year APR for all teams. The current cohort year is 2019-20.

So how does VCU stack up?

Academic Unit Eligibility Report: Individual Teams

Sport	APR Multiyear (N)	APR 2019- 20 (N)	Eligibility/Grad Multiyear	Eligibility/Grad 2019-20	Retention Multiyear	Retention 2019-20
Men's Basketball	971 (52)	962 (13)	981	923	951	1,000
Men's Cross Country	989 (24)	1,000 (7)	978	1,000	956	1,000
Men's Golf	980 (26)	1,000 (6)	980	1,000	980	1,000
Men's Soccer	989 (81)	985 (18)	986	1,000	985	970
Men's Tennis	990 (29)	1,000 (7)	1,000	1,000	958	1,000
Men's Track	986 (90)	1,000 (23)	971	1,000	971	1,000
Women's Basketball	977 (57)	964 (14)	982	964	962	964
Women's Cross Country	1,000 (24)	1,000 (5)	1,000	1,000	1,000	1,000
Field Hockey	993 (71)	1,000 (14)	993	1,000	985	1,000
Women's Lacrosse	998 (114)	1,000 (27)	1,000	1,000	995	1,000
Women's Soccer	995 (115)	991 (29)	1,000	1,000	986	981
Women's Tennis	981 (30)	966 (8)	1,000	1,000	961	929
Women's Track	991 (112)	991 (27)	986	981	991	1,000
Women's Volleyball	989 (49)	979 (13)	1,000	1,000	978	958

Processed Grade Changes

Year	Student-athletes	Overall	Percentage
2017	42	4,246	0.99%
2018	39	4,794	0.81%
2019	68	5,126	1.33%
2020	57	5,898	0.97%
Overall	206	20,064	1.03%

ATTACHMENT G

VCU State of the Research

Srirama Rao, Ph.D.

Vice President for Research and Innovation

December 11, 2020

Strategic Research Priorities Plan Mission

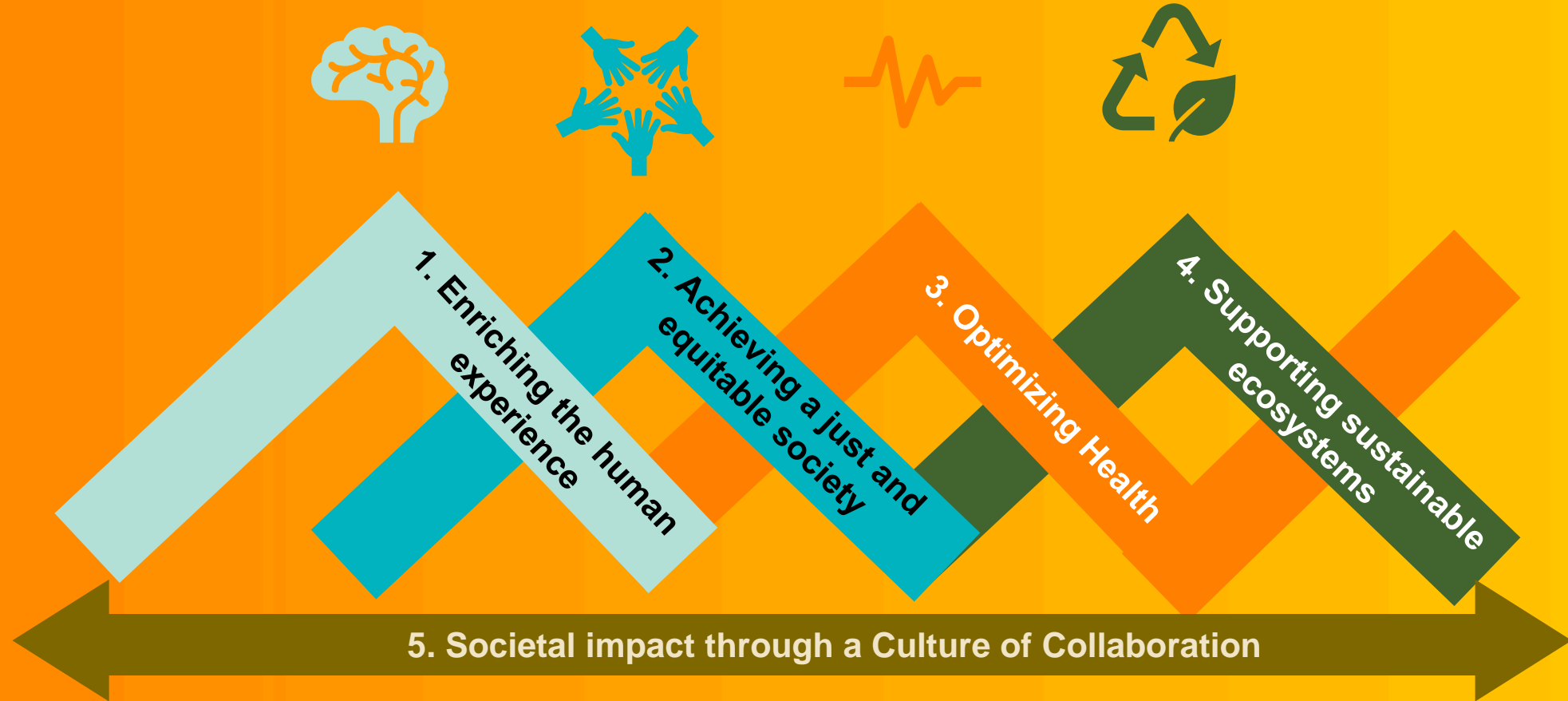
To enrich the human experience and advance human health and well-being through exceptionally creative, collaborative and community-engaged research.

Overarching theme:

“Improving the Human Condition”

(As guided by VCU’s QUEST 2025)

VCU's Strategic Research Initiatives



“Improving the Human Condition”



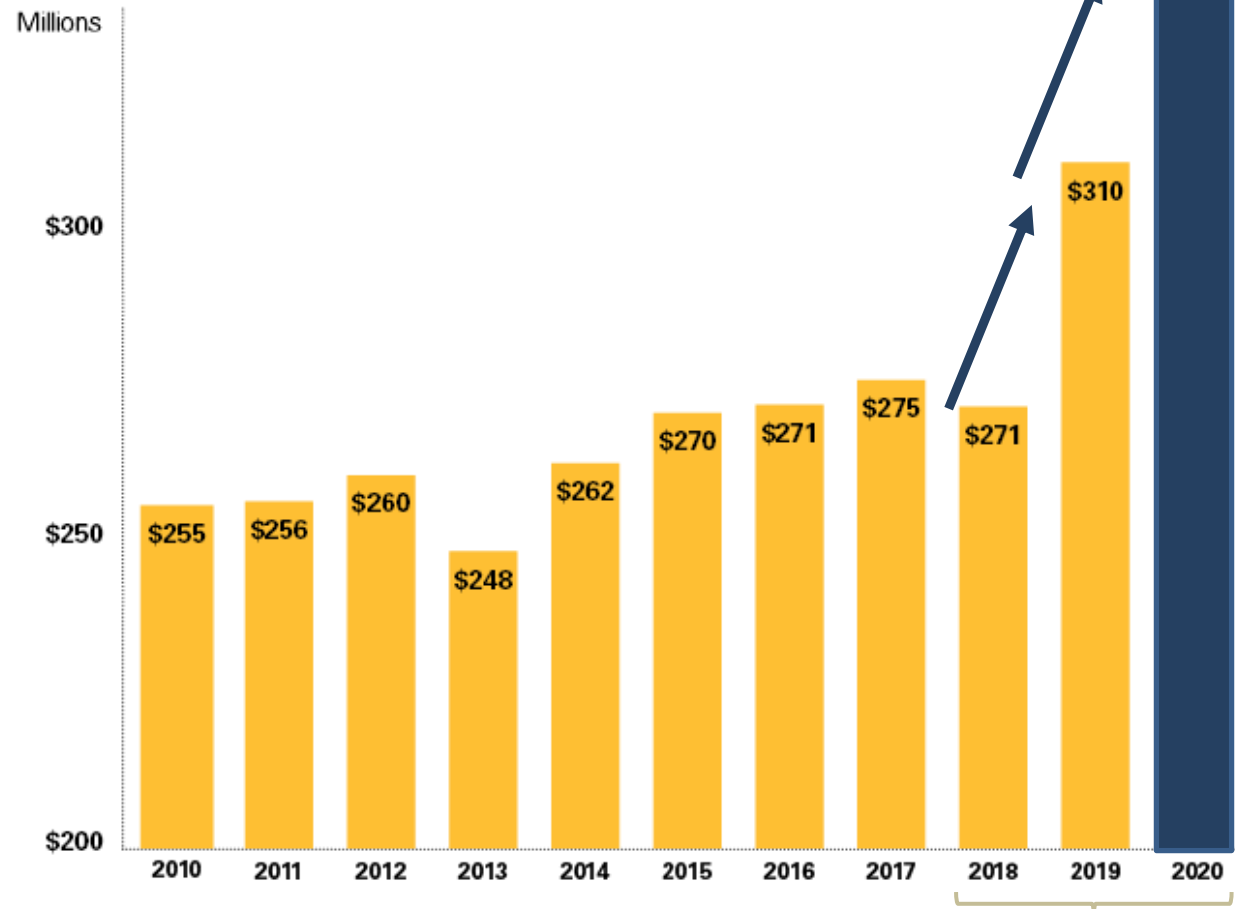
Research metrics, highlights, and impact

onevcu

RESEARCH

Sponsored Program Awards: FY2010 to 2020

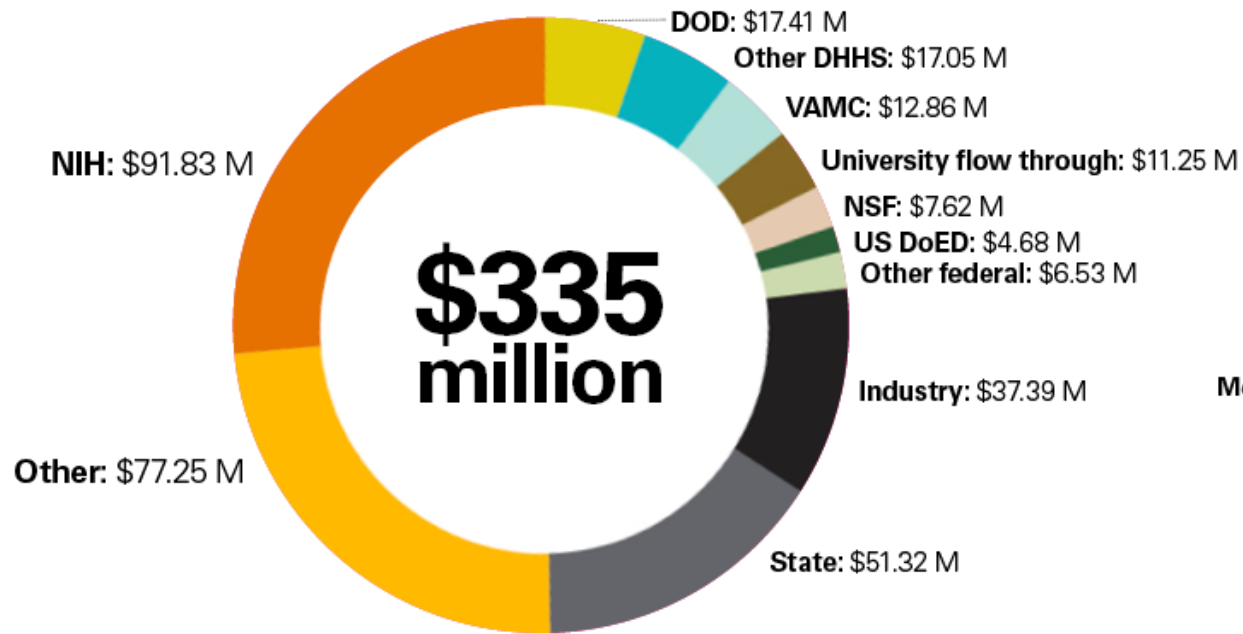
Awards by year
2010-2020



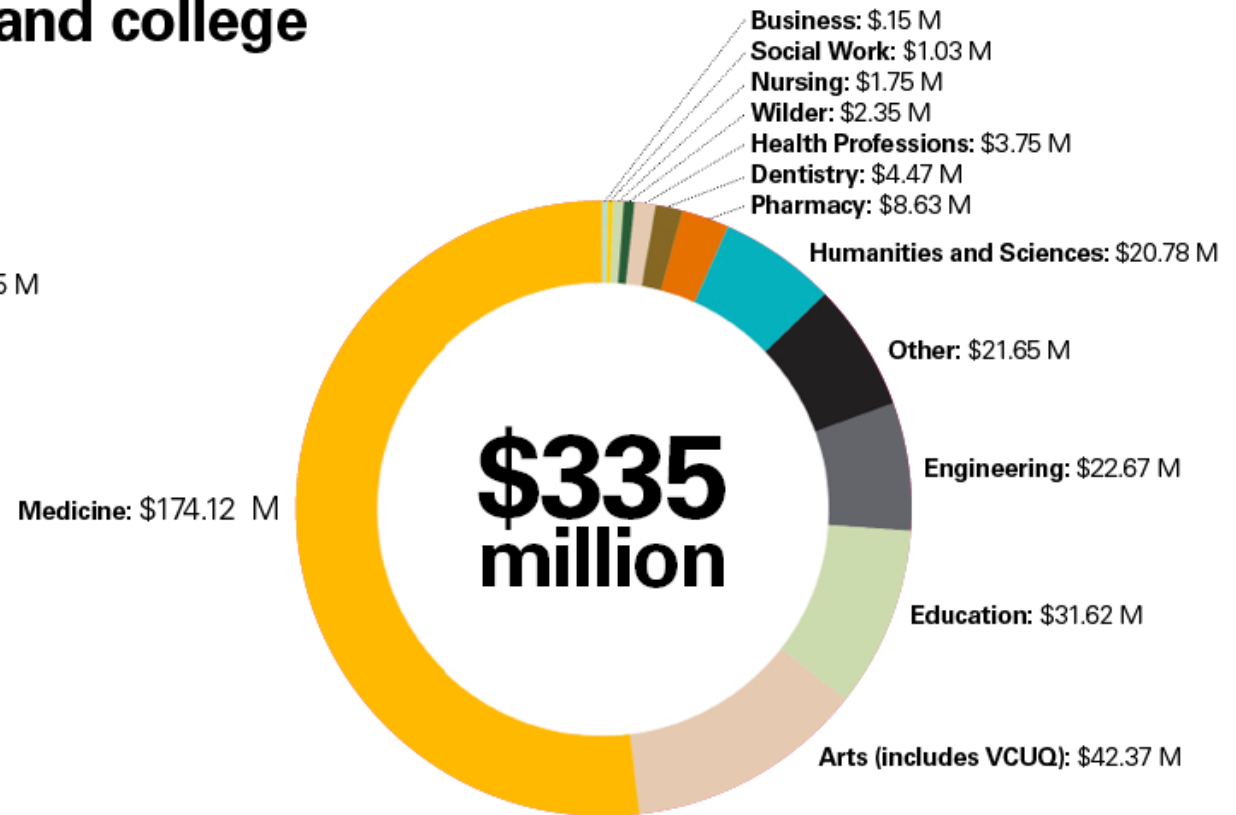
FY2020 Sponsored Program Awards – up 8%

Awards by source

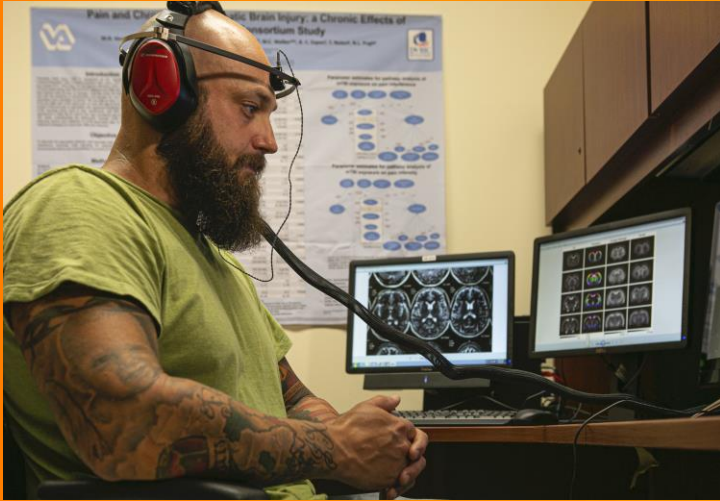
Up 8% over previous year



Awards by school and college



Highlights of Funding for FY2020



\$50M from DOD | Cifu, SoM



\$13M in Fed Funds | Lloyd, CoHD



Adolescent Brain Cognitive Development[®]
Teen Brains. Today's Science. Brighter Future.

\$11M from NIDA | Neale/Bjork SoM



>\$8M in Fed Grants | Wehman, SoE/M



\$7.8M from NIH | Miles, SoM



**\$2.28M from NIJ | Peace/
Ehrhardt/Cruz/Williams, CHS**



**\$2.5M from DoE | Gupta,
CoEgr**

Technology Commercialization and Economic Innovation

Technology Commercialization and Economic Innovation

10 Years of Impact

1,160

Invention
Disclosures

>1,500

Patents filed

165

Patents issued

158

Licenses
& Options

>\$26M

Licensing
Revenue

55+

Startups
Formed

\$64M

In start up
funding

42

Products
in Market

Facilitated by Innovation Gateway and VCU Ventures

VCU Innovation: Commercialization Pipeline

Commercialization Pipeline - Therapeutics / Diagnostics

Licensed Technology	Inventors	Company	Licensed	Development Status						
				R+D	Preclinical	Phase I	Phase II	Phase III	Approval	Market Entry
Chimeric Lyme Disease Vaccine for Dogs	Marconi	Zoetis	2012							
Novel Compounds for Therapy of Hypercholesterolemia, Hypertriglycerides,	Ren	Durect	2013							
Novel Stilbene Derivatives for Cancer Treatment	Lee	Teclison	2014							
Immunotherapy/Gene Therapy for Cancer Treatment	Fisher	ILCT	2018							
Novel Small Molecules for Cancer Treatment	Fisher	InVaMet	2018							

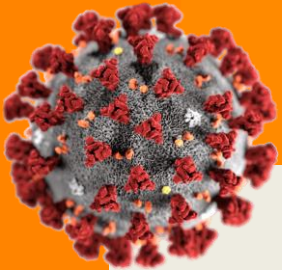
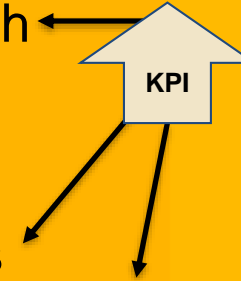
Commercialization Pipeline - Medical Devices

Licensed Technology	Inventors	Company	Licensed	Development Status				
				R+D	Preclinical	Clinical	Regulatory approval	Market Entry
ImmunoCap Tryptase for Diagnosis of Systemic Mastocytosis	Schwartz	Thermo Fisher (Phadia)	1990					
Electrospun Dextran Hemostatic Bandage	Simpson, Bowlin	St. Theresa Medical	2010					
Diagnostic for Neuro-Muscular Disorders	Wetzel, Baron Gitchell	RightEye	2017					
Raman Spec Tissue Interrogation	Ward, Torres Turner	Pendar Medical	2006					
Breast Shield for Radiation Atten	Parker	WIT	2005					
Nerve Tape	Isaac	Axion	2017					
New Aerosol Formulations/Device	Longest/Hindle	Quench Medical	2018					
Olfactory Implant System	Costanzo/Coelho	Lawnboy Ventures	2018					

Clinical Research

Clinical Research: FY2020 Impact

- **\$34M** – Up by 26% over previous year
- **5,191** total active participants enrolled in clinical research
 - **879** active clinical studies including:
 - **572** active clinical trials
 - **326** designed by VCU Investigator-initiated trials
 - **36** VCU faculty-held FDA applications for new drugs/devices



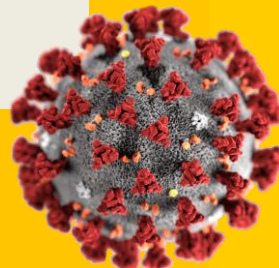
VCU's COVID-19 Portfolio Update

16 active clinical trials with **172** total participants
10 patient registry/expanded access studies with **2,365** participants

Data from OVPRI/WCCTR

Vaccine Trials

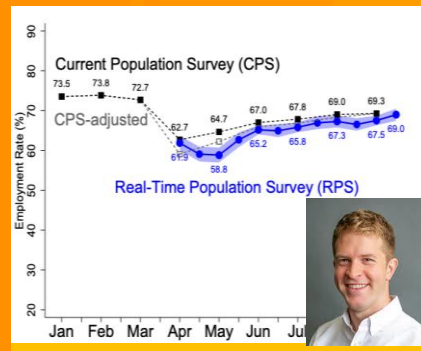
- Sanofi Pasteur - ***in activation*** (sought by OVPRI)
- Pfizer - pre-activation (sought by PI)



COVID-19: Impactful and Translational Research



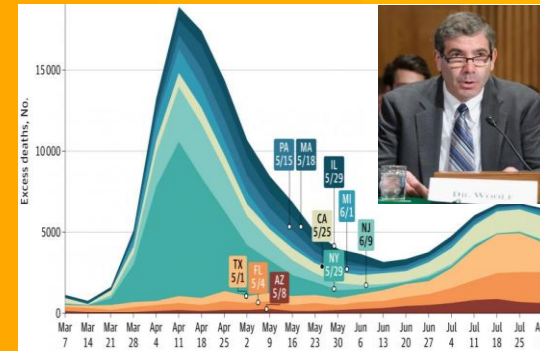
Clinical Trials



Labor Survey



Drug Supply



Excess Deaths



Opioid Overdoses



Sterile Masks



Health Messaging



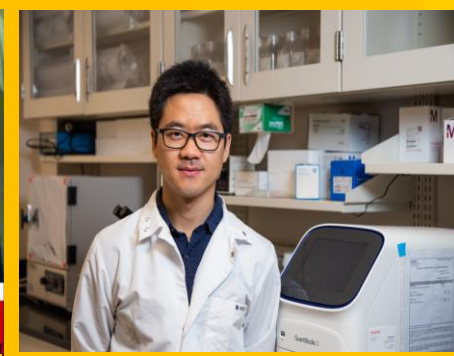
Biobank for research



Educational Impact



Mask Mandates



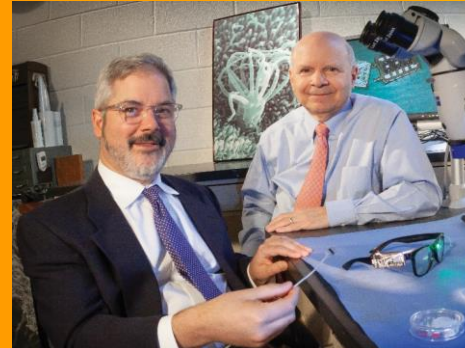
Vaccine delivery



Business Impact



Renter Evictions



Loss of Smell



Elder Isolation



Viral Proteins

<https://youtu.be/2FIUpDNY52I>



Institutes, Centers, Cores: Drivers for Translational Research

Center for High Performance Computing

Providing the essential tool of 21st century science



Four major computing clusters support diverse fields including physical, and environmental sciences, statistics, data science



Lipidomics & Metabolomics Mass Spectrometry Core

Exploring the lipidome in cancer and health



L. Ashley Cowart, PhD

Collaborative Advanced Research Imaging

An engine for translational science



F. Gerard Moeller, MD

Philips Ingenia 3.0 Tesla MRI

Functional MRI brain image

Research-dedicated human functional MR imaging advances the boundaries of behavioral and addiction neuroscience and cardiology



The VCU Mid-Atlantic Twin Registry

Facilitating twin studies across the nation



Judy Silberg (L), PhD MATR Director
Emily Lilley (R), MATR Administrator

(VCU ABCD twin study PI: Michael Neale, PhD)

A unique national resource with > 66,000 identical and fraternal twins, MATR facilitates twin studies such as the multi-site ABCD study of environmental and genetic impacts on brain development



Nanomaterials Characterization Core

Invention begins with materials



Massimo Bertino, PhD

VCU Institute for Engineering and Medicine

Advanced instrumentation

Nanomaterials, surface characterization and nanofabrication. Twenty years of regenerative medicine, materials science, microelectronics, and more

Office of the Vice President for Research and Innovation



2019 Research Rankings

2nd

School of the Arts
(1st among public
institutions)*

17th

School of
Pharmacy**

20th

Addiction**

22nd

School of
Dentistry**

22nd

School of Social
Work*

38th

Neuroscience**

41st

School of
Education*

48th

School of Nursing*

64th

School of
Medicine**

65th

Among U.S.
Public Research
Universities

*VCU Graduate Schools Ranked in the Top 50

**Blue Ridge Ranking

NIH – Blue Ridge Ranking

Neurosciences (opioid/alcohol/addiction) and cancer*

	Addiction	Neuroscience	NCI (Cancer)	NIDA	NIAAA	NINDS
VCU	20	38	86	22	16	78
UVA	150	77	49	126	n/a	48
VT	120	94	166	127	115	71
GMU	50	116	n/a	39	231	328
W&M	n/a	711	n/a	n/a	n/a	379

*Relative to other Virginia research universities

National Institutes of Health:
NCI: Cancer
NIDA: Drug Abuse
NIAAA: Alcohol Abuse & Alcoholism
NINDS: Neurological Disorders & Stroke

SRPP Goals for National Prominence by 2025

**Accomplish
Top 50 Ranking**
(>\$400M/year in
sponsored awards)

**Lead in DEI
Research**

**Enhance
Student
Experience**

**Collaborate and
Engage with
Community**

Achievable through strategic implementation and investment in R&D

**Propel
Discovery and
Innovation**

**Expand
Training**

**Increase
Clinical
Research**

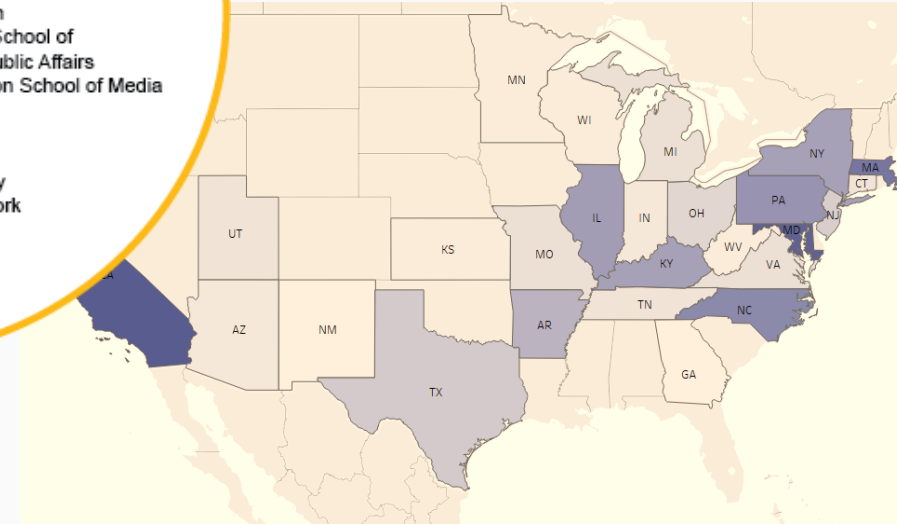
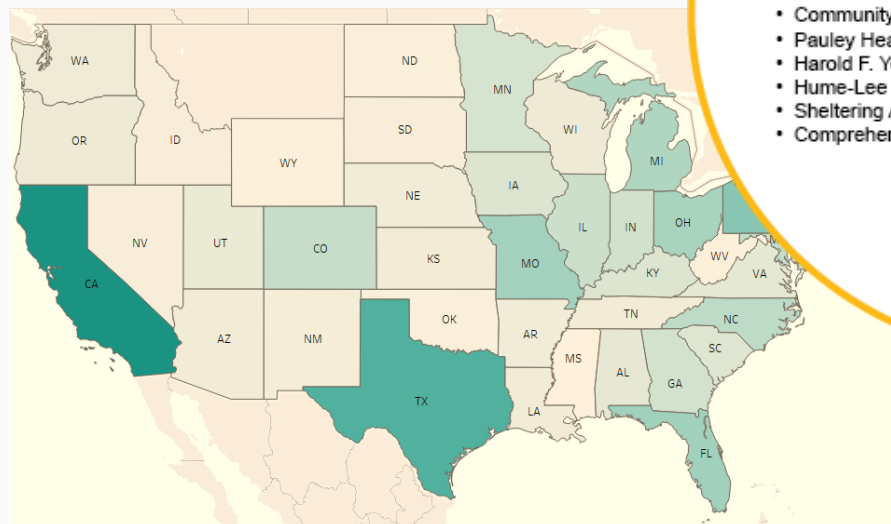
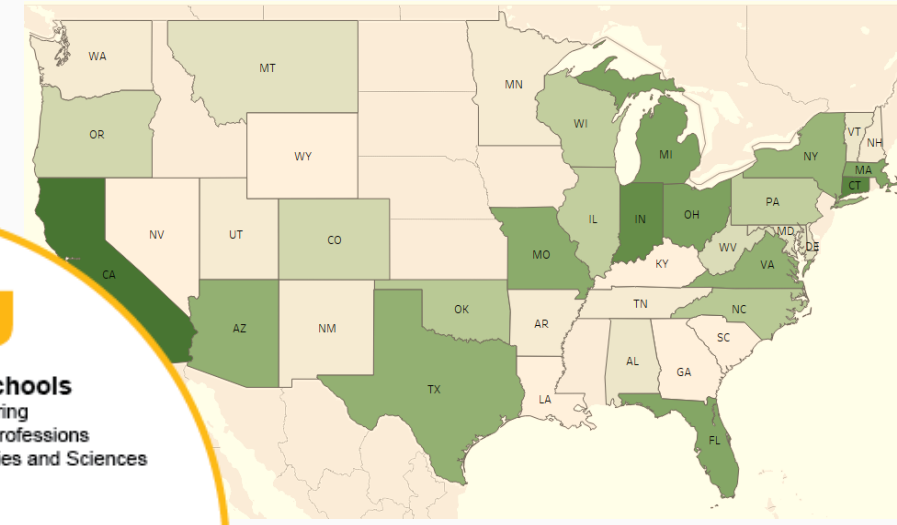
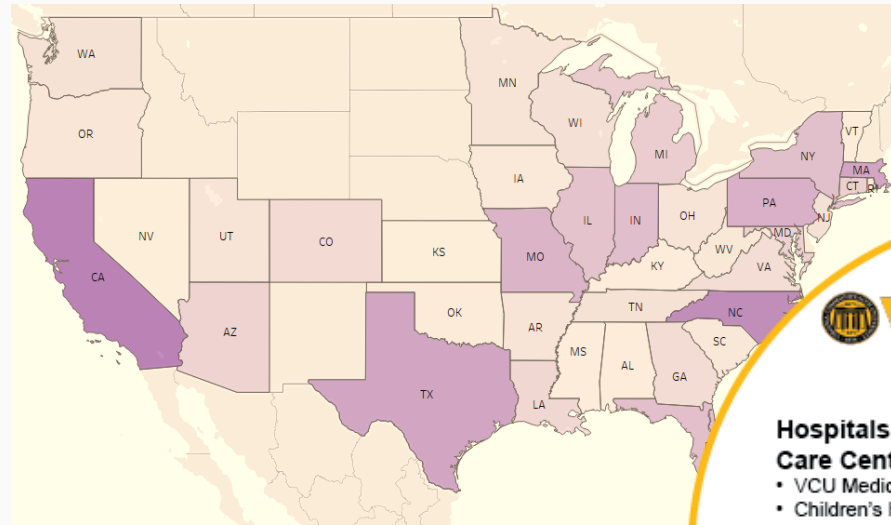
**Achieve
Comprehensive
Cancer Center
Status**



VCU's Strategic Research Initiatives: Nationally Prominent and Impactful

Enriching the human experience

Achieving a just and equitable society



VCUHealth™

Hospitals and Comprehensive Care Centers

- VCU Medical Center
- Children's Hospital of Richmond at VCU
- Community Memorial Hospital
- Pauley Heart Center
- Harold F. Young Neurological Center
- Hume-Lee Transplant Center
- Sheltering Arms Institute
- Comprehensive Stroke Center



VCU

Colleges and Schools

- College of Engineering
- College of Health Professions
- College of Humanities and Sciences
- School of the Arts
- School of Business
- School of Dentistry
- School of Education
- L. Douglas Wilder School of Government and Public Affairs
- Richard T. Robertson School of Media and Culture
- School of Medicine
- School of Nursing
- School of Pharmacy
- School of Social Work
- VCU Life Sciences

**Research
Institutes,
Centers,
and Cores**

Optimizing health

Supporting sustainable ecosystems



Goal 1.1: Serve needs of individuals and communities by developing creative technological and analytical improvements

Goal 1.2: Enrich lives and elevate human understanding and aspirations through cultural contributions and critical analysis (in arts, humanities and social sciences)

RESEARCH



Enriching the Human Experience

Key Objectives

- Conduct systematic pedagogy studies
- Advance AI, VR, data science, cybersecurity, machine learning research
- Serve society through policy-oriented research
- Contribute to worldwide intellectual capital
- Improve awareness of contributions to arts, humanities, business, policy, social and physical sciences





Initiative 2: Achieving a Just and Equitable Society

<https://youtu.be/IQxKtVubOBo>

Goal 2.1: Reduce the impact of inequality, discrimination, and population-level disparities

Goal 2.2: Prioritize research that reflects the perspectives and needs of diverse communities



Achieving a Just and Equitable Society

Key Objectives

- Engage URM faculty, staff, students in DEI research
- Develop pilot funding for solutions for inequity
- Educate diverse learners through research, be culturally responsive and meet urban high school needs
- Enhance community collaborations and make available to local HBCU's and MSI's
- VCU leads in DEI research



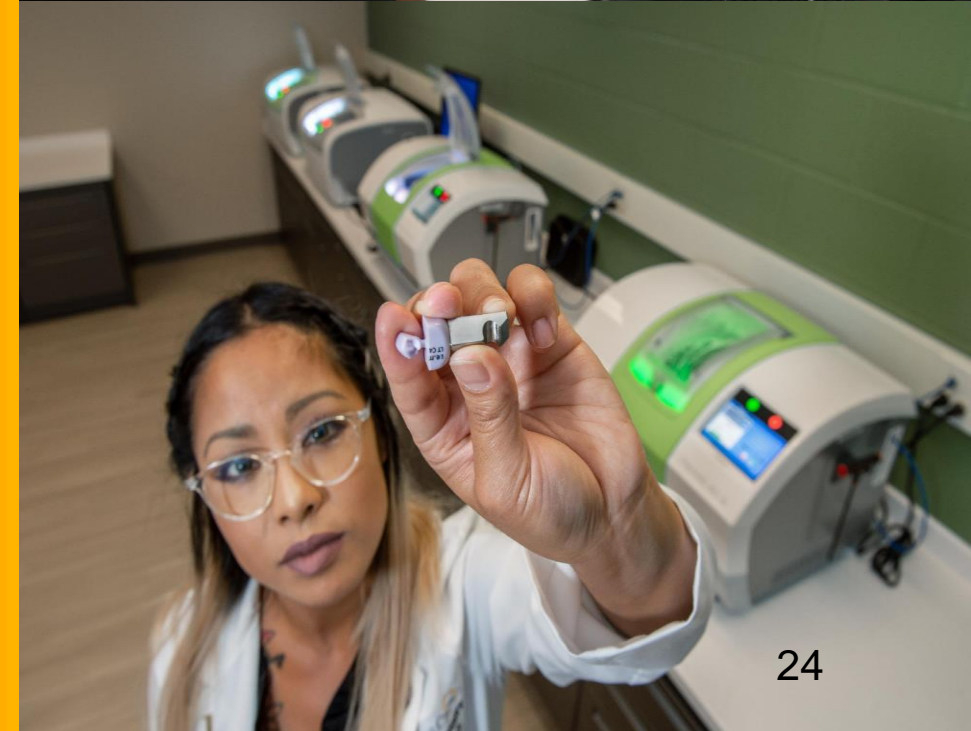
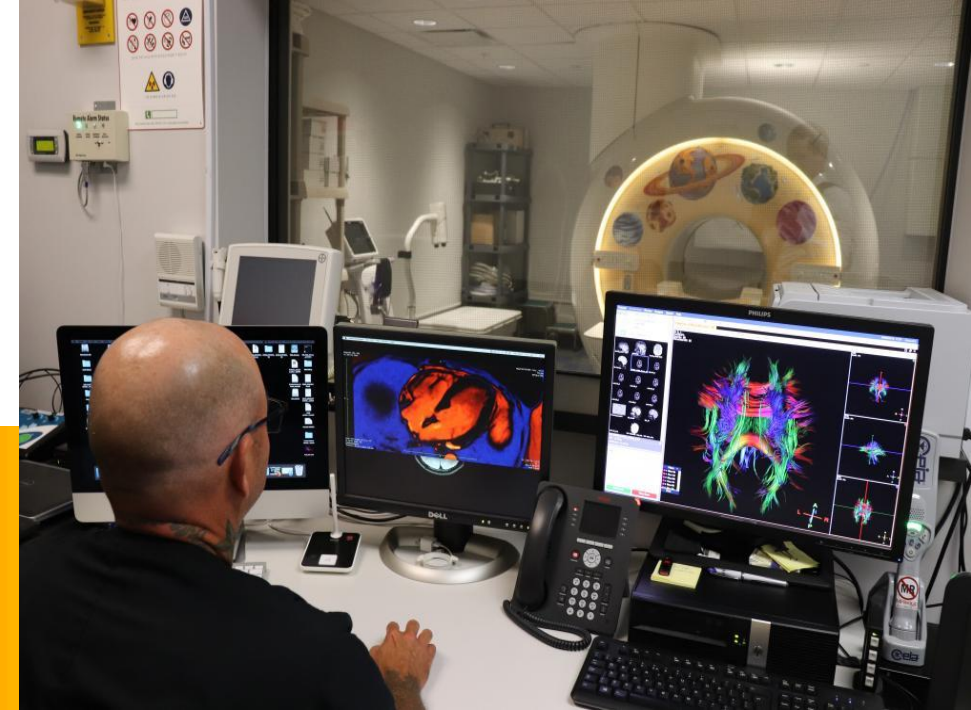


Initiative 3: Optimizing health

Goal 3.1: Reduce the burden of disease and improve wellness

Goal 3.2: Generate new medications, biologic treatments, interventions, devices, and vaccines

Goal 3.3: Improve health outcomes by leveraging emerging technologies, data science, AI and machine learning



Optimizing health

Key Objectives

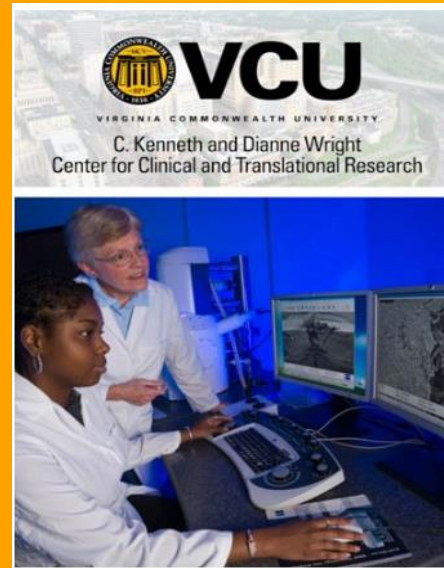
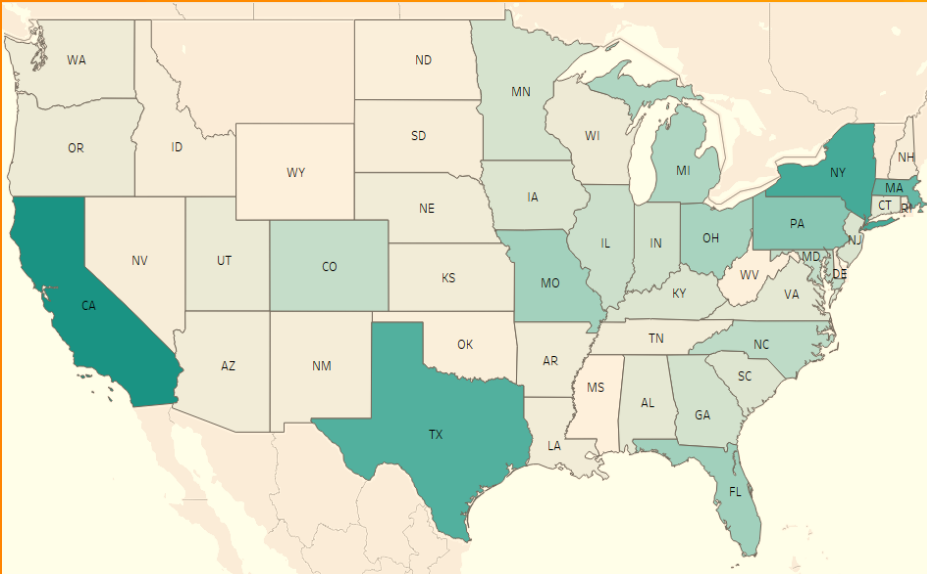
- Offer personalized treatments and interventions
- Engage in world class discoveries and breakthroughs in areas of strength



Optimizing health

Key Objectives

- Facilitate clinical research, trials and activation
- Encourage “researcher and clinician” partnerships



Renewal of the CTSA and CCSG

Optimizing health

Key Objectives

- Enhance Data Science and AI
- Engage Stakeholders
- Conduct compliant data sharing



Optimizing health

Key Objectives

- Enhance expertise and achieve breakthroughs leading to drug discovery and development
- Address pressing community needs



Comprehensive Status for MCC





Initiative 4: Supporting sustainable ecosystems

<https://www.youtube.com/watch?v=qkuZjoBv7qM>

Goal 4.1: Advance renewable energy sources, clean air and water, and resilient natural systems

Goal 4.2: Create environmentally sustainable materials, products, processes, and infrastructure

Goal 4.3: Educate our communities and inform positive changes in environmental policy and practice at local, state and national scales

Energy, Environment, and the Community



5. Societal impact through a Culture of Collaboration

Goal 1: Create a culture that prioritizes research and innovation

Goal 2: Facilitate research collaborations

Goal 3: Accelerate discoveries through excellence in training

Goal 4: Translate and communicate research to the community and engage in dialogue

onevcu | RESEARCH



onevcu | RESPONSIBLE
TOGETHER



One VCU Research: “Improving the Human Condition”



VCUHealth™

Hospitals and Comprehensive Care Centers

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VCU

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- School of Nursing
- School of Pharmacy
- School of Social Work
- VCU Life Sciences

Research Institutes, Centers, and Cores

Questions, comments, and feedback



ATTACHMENT H

Board of Visitors
Audit, Integrity and Compliance Committee

December 11, 2020



VCU

Auditor of Public Accounts (APA)

Mike Reinholtz, Audit Director

- Annual Audit for Year Ended June 30, 2020
 - Independent Auditor's Report (Opinion) on the Financial Statements
 - Report on Internal Control and Compliance
 - Required Communications

Data & Information Management Council (DIMC)

Board of Visitors – Audit, Integrity and Compliance Committee
December 11, 2020

Monal Patel, Associate Vice Provost, Institutional Research and Decision Support
Alex Henson, Chief Information Officer

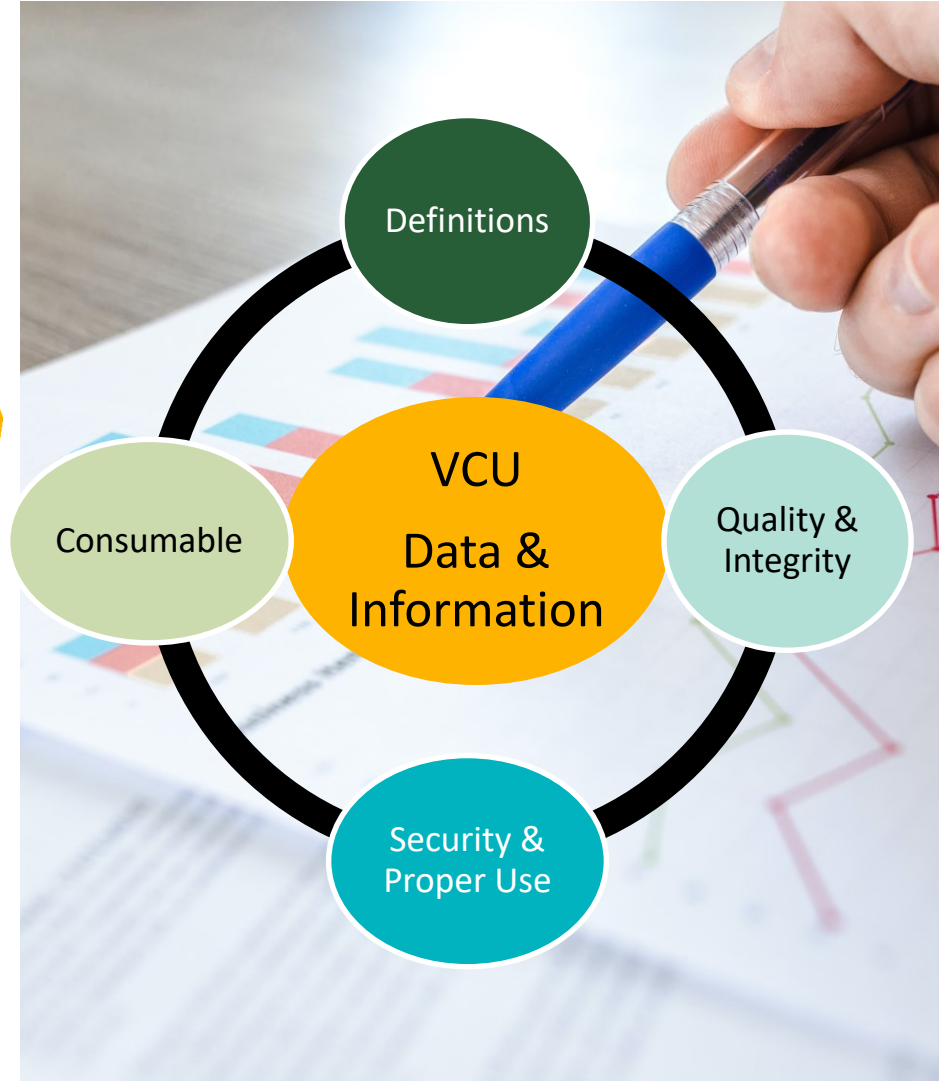


Data Governance at VCU

Purpose: Ensure data and information provided to the university community is accessible, informative, and reliable.

Who: DIMC Steering Committee + Data Trustees + Data Stewards

How: DIMC policy; process of governing data as it transforms from transactional systems to a consumable form



Consumable

- Intended to be used relatively quickly

Data Portal Search

Interactive and visual information supporting campus decision making

Welcome to VCU's information portal, an official collective of dashboards to assist in inquiries. Data are available when you need it for data-driven decision support.

[Dashboard Development Guidelines](#)

All Academic Faculty & Staff Finance Human Resources Research & Grants Student Enrollment

Human Resources Dashboard

The HR Dashboard is available to VPs and executive leadership as well as Human Resources Professionals (HRPs). The dashboard presents an overall trend of VCU as well as each organization's human capital and related expenditures. It includes Demographics, Recruitment, Turnover, Benefits, Compensation, Workforce Strategy, Performance Management, Retirement, and Geography metrics.

Department Profiles

Each unit on campus has the ability to achieve VCU's mission: Together We Transform. This restricted access dashboard provides units the capability to drill into their own metrics related to the overall university mission.

Access: Restricted to authorized VCU eID users. Request access to this dashboard at URL: <https://irds.vcu.edu/dpaccessrequest.html>

Principal Investigator Dashboard

The Principal Investigator Dashboard is a monitoring tool that allows Principal Investigators (PI) the ability to view all of their financial grant information in one place. On the dashboard, the PI can see all Grant Expenditures, Personnel Commitments on grants, Current and Pending Proposals, and Monthly Expense reports.

Access: Principal Investigators are

Strategic Plan Dashboard

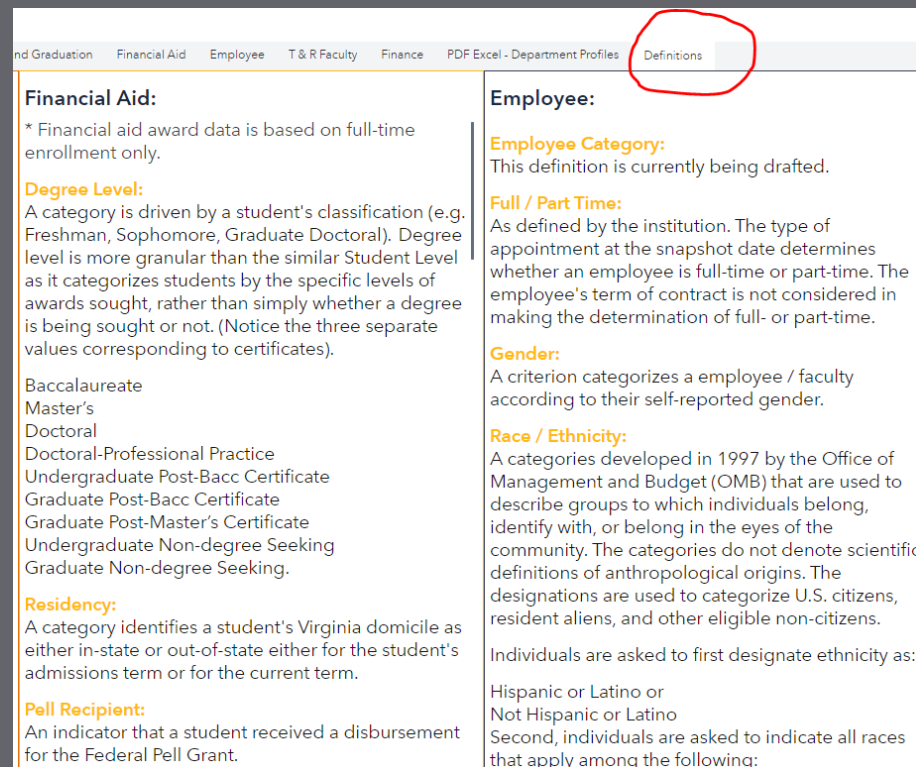
VCU's strategic plan, Quest 2025, continues to make VCU the premier urban, public research university. This dashboard visualizes the plan's metrics and the progress toward the goal.

Access: Public

Definitions

- Proper interpretation knowledge of source

- Data Dictionary



Financial Aid:
* Financial aid award data is based on full-time enrollment only.

Degree Level:
A category is driven by a student's classification (e.g. Freshman, Sophomore, Graduate Doctoral). Degree level is more granular than the similar Student Level as it categorizes students by the specific levels of awards sought, rather than simply whether a degree is being sought or not. (Notice the three separate values corresponding to certificates).

Baccalaureate
Master's
Doctoral
Doctoral-Professional Practice
Undergraduate Post-Bacc Certificate
Graduate Post-Bacc Certificate
Graduate Post-Master's Certificate
Undergraduate Non-degree Seeking
Graduate Non-degree Seeking.

Residency:
A category identifies a student's Virginia domicile as either in-state or out-of-state either for the student's admissions term or for the current term.

Pell Recipient:
An indicator that a student received a disbursement for the Federal Pell Grant.

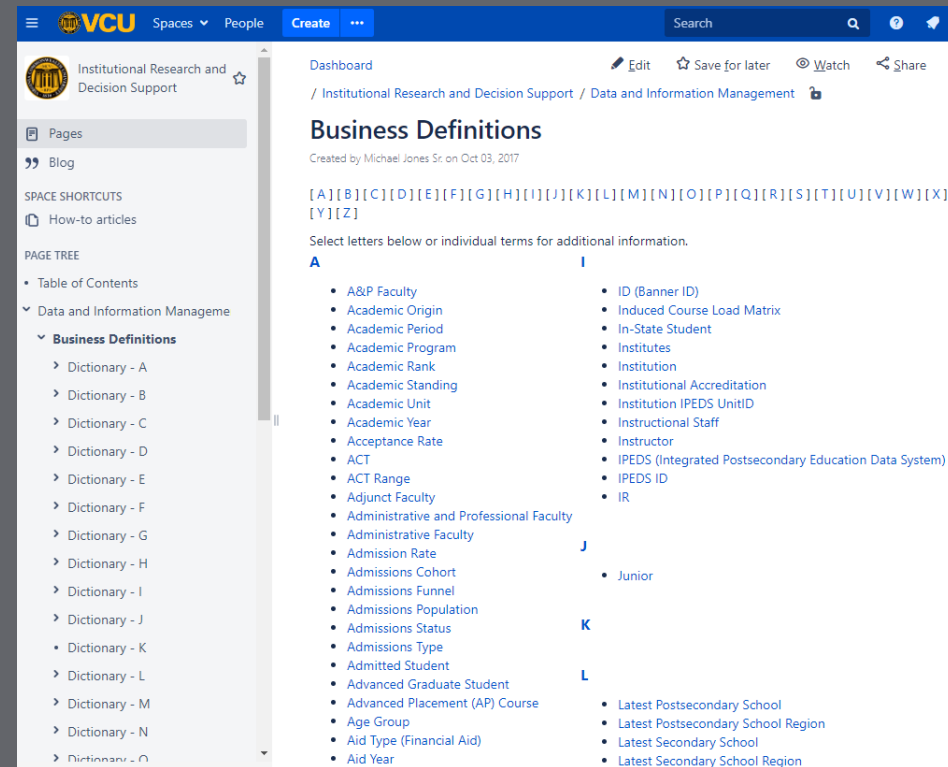
Employee:
Employee Category:
This definition is currently being drafted.

Full / Part Time:
As defined by the institution. The type of appointment at the snapshot date determines whether an employee is full-time or part-time. The employee's term of contract is not considered in making the determination of full- or part-time.

Gender:
A criterion categorizes an employee / faculty according to their self-reported gender.

Race / Ethnicity:
A categories developed in 1997 by the Office of Management and Budget (OMB) that are used to describe groups to which individuals belong, identify with, or belong in the eyes of the community. The categories do not denote scientific definitions of anthropological origins. The designations are used to categorize U.S. citizens, resident aliens, and other eligible non-citizens.

Individuals are asked to first designate ethnicity as:
Hispanic or Latino or
Not Hispanic or Latino
Second, individuals are asked to indicate all races that apply among the following:



VCU Spaces People Create ... Search

Institutional Research and Decision Support

Pages
Blog

SPACE SHORTCUTS
How-to articles

PAGE TREE
Table of Contents
Data and Information Management
Business Definitions
Dictionary - A
Dictionary - B
Dictionary - C
Dictionary - D
Dictionary - E
Dictionary - F
Dictionary - G
Dictionary - H
Dictionary - I
Dictionary - J
Dictionary - K
Dictionary - L
Dictionary - M
Dictionary - N
Dictionary - O

Dashboard
/ Institutional Research and Decision Support / Data and Information Management

Business Definitions

Created by Michael Jones Sr on Oct 03, 2017

[A][B][C][D][E][F][G][H][I][J][K][L][M][N][O][P][Q][R][S][T][U][V][W][X][Y][Z]

Select letters below or individual terms for additional information.

A

- A&P Faculty
- Academic Origin
- Academic Period
- Academic Program
- Academic Rank
- Academic Standing
- Academic Unit
- Academic Year
- Acceptance Rate
- ACT
- ACT Range
- Adjunct Faculty
- Administrative and Professional Faculty
- Administrative Faculty
- Admission Rate
- Admissions Cohort
- Admissions Funnel
- Admissions Population
- Admissions Status
- Admissions Type
- Admitted Student
- Advanced Graduate Student
- Advanced Placement (AP) Course
- Age Group
- Aid Type (Financial Aid)
- Aid Year

J

- Junior

K

L

- Latest Postsecondary School
- Latest Postsecondary School Region
- Latest Secondary School
- Latest Secondary School Region

Secure Access, Quality & Integrity

- **The problem:** De-centralized data ecosystem. Pockets of excellence; sometimes difficult to integrate data.
- **A solution:** Data Warehouse
 - Central repository of information for which data transformations are governed
 - Integrate heterogeneous enterprise data sources (Student, HR, Finance)
 - Authoritative, single source of truth
 - Effective implementation of institutional change management
- **DIMC Plan:** Initiate Data Warehouse project
 - Leverage current Operational Data Store and reporting environments
 - Initial focus on Student data and systems
 - First phase work to be completed in Spring, 2021 with initial rollout in Summer, 2021
 - Prioritize and implement other key data integrations over FY 21-22

Committee Dashboard Measures

- Data Governance Program
- Data Security
- ERM Mitigation Plans
- Planned Audits
- Planned Special Projects
- Ethics and Compliance Program Oversight

Status of FY20 Follow-up Report Corrective Action

- FY20 Annual Follow-Up Report discussed at September BOV
- Committee requested status report on corrective action

<u>Finding</u>	Scheduled Corrective Action <u>Due Date</u>	AICC <u>Meeting Date</u>
<i>School of Dentistry IT Physical Access</i>	12/20	3/21
<i>School of Arts Qatar IT Assessments</i>	12/20	3/21
<i>College of HS Records Management</i>	01/21	3/21
<i>College of HS Reconciliations</i>	01/21	5/21
<i>School of Arts Qatar Reconciliations</i>	02/21	9/21

Department of Athletics Audit Report

- Objectives: Forecasting, reserve balances, and fiscal and administrative processes were adequate.
- Conclusion: All objectives were met and no Board Level findings.

Make it real.
CAMPAIGN FOR VCU

Board of Visitors

Post-Campaign Analysis

Jay Davenport, Vice President, Development and Alumni Relations

December 11, 2020



VCU

ATTACHMENT I

\$841,606,604



VCU

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CAMPAIGN FOR VCU

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Campaign Overview



VCU Campaign History

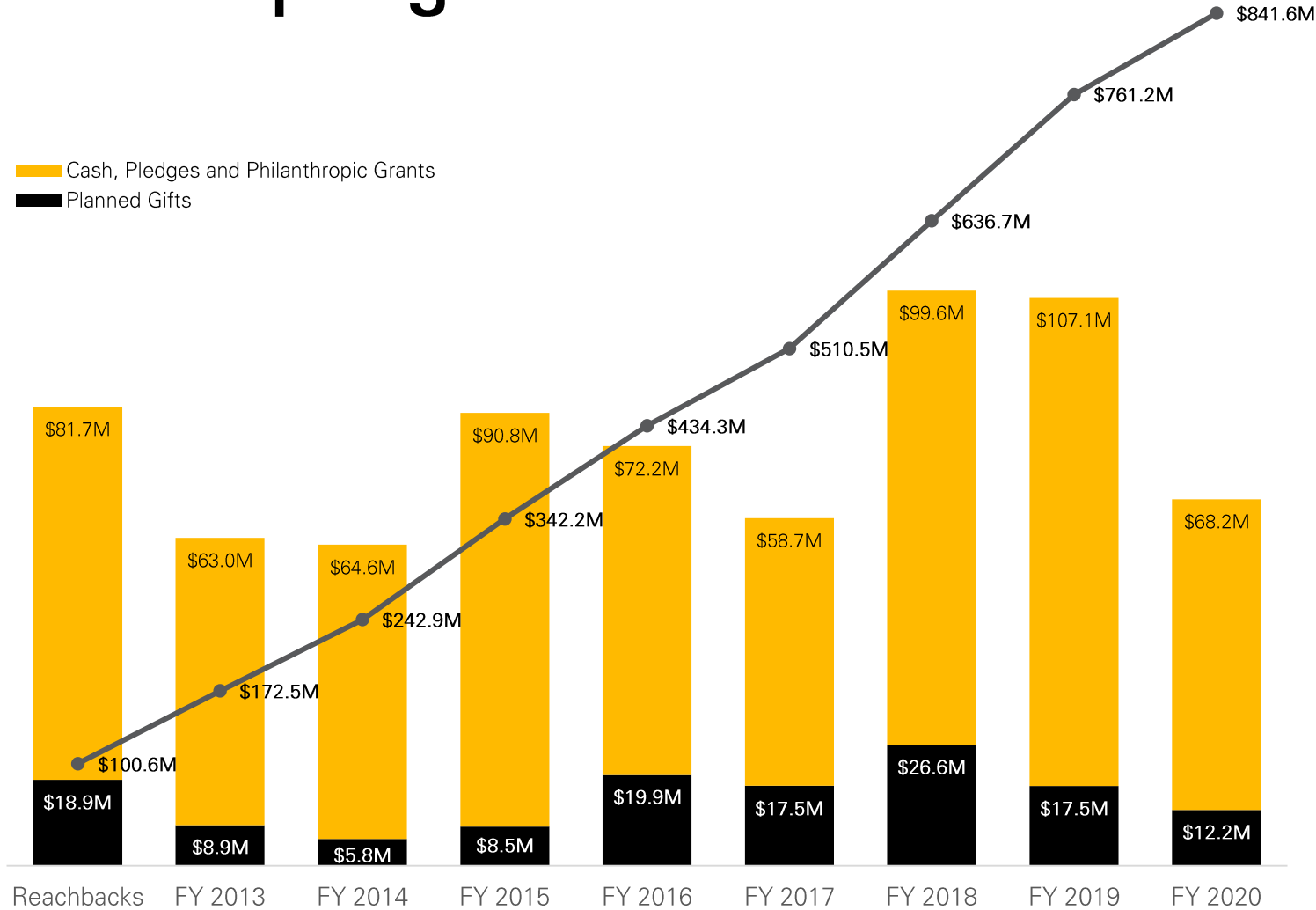
Name of Campaign	Dates of Campaign	Dollar Goal	Amount Raised
Making a Difference	1984 - 1990	\$52 Million	\$62 Million
Partners for Progress	1992 - 1999	\$125 Million	\$168 Million
The Campaign for VCU	2000 - 2007	\$330 Million	\$410 Million
Make It Real Campaign for VCU	2013 - 2020	\$750 Million	\$841.6 Million



Due to rounding, some totals may not correspond with the sum of the separate figures.

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Campaign Totals

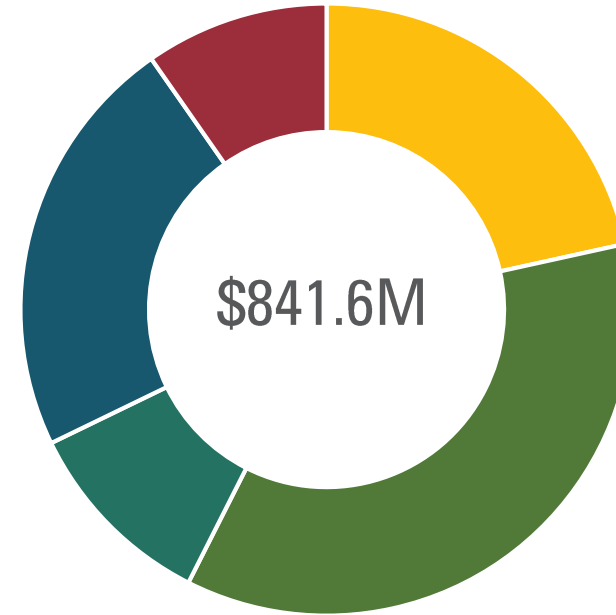


\$705.8M (84%) cash, pledges and philanthropic grants

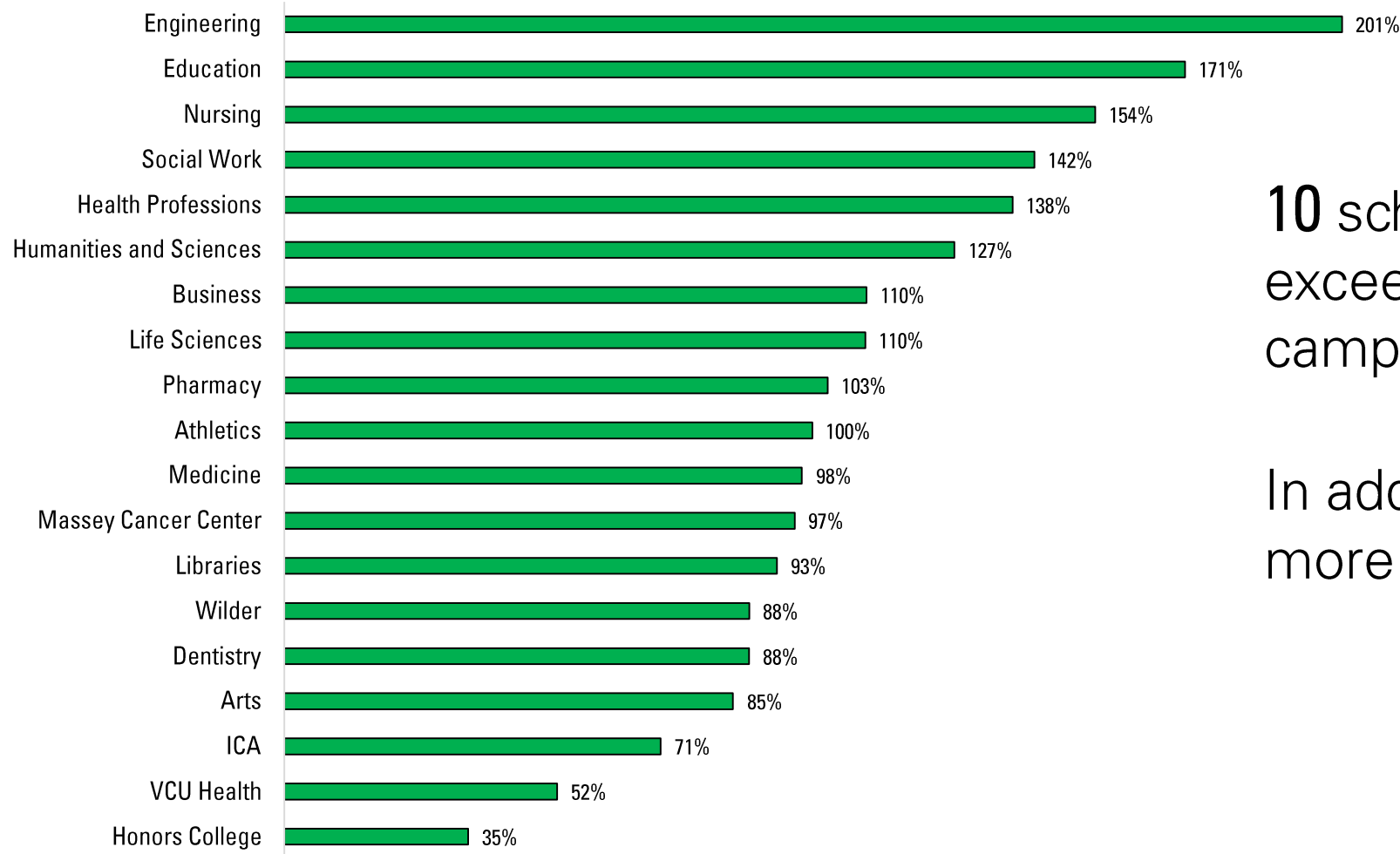
\$135.8M (16%) planned gifts

Campaign Totals – Sources

■	22%	Alumni	\$181.4M
■	36%	Friends	\$302.2M
■	10%	Corporations	\$87.2M
■	22%	Foundations	\$189.2M
■	10%	Organizations	\$81.7M



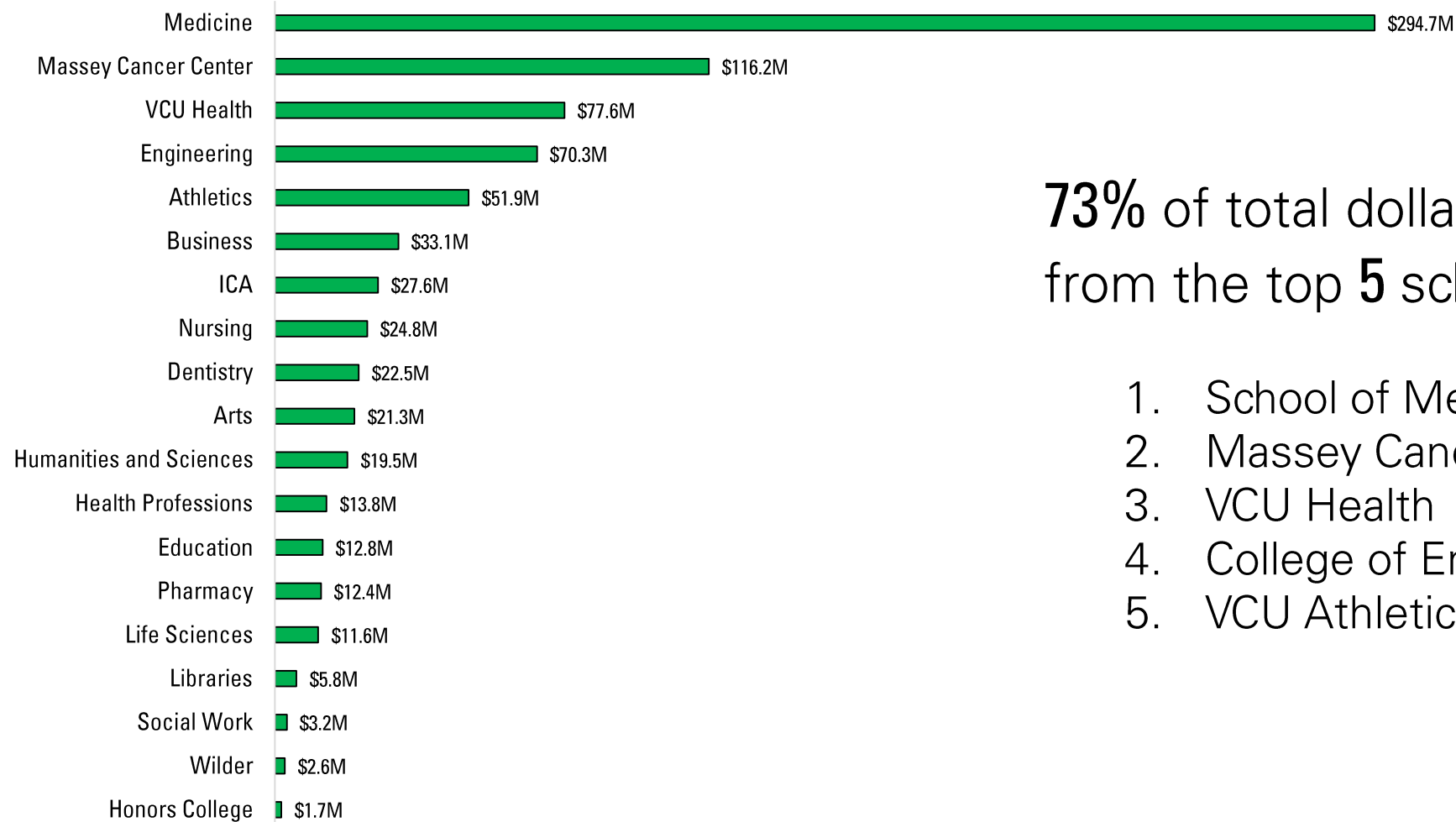
School/Unit Totals



10 schools and units exceeded their individual campaign fundraising goals

In addition, **6** raised **85%** or more of their goal

School/Unit Totals



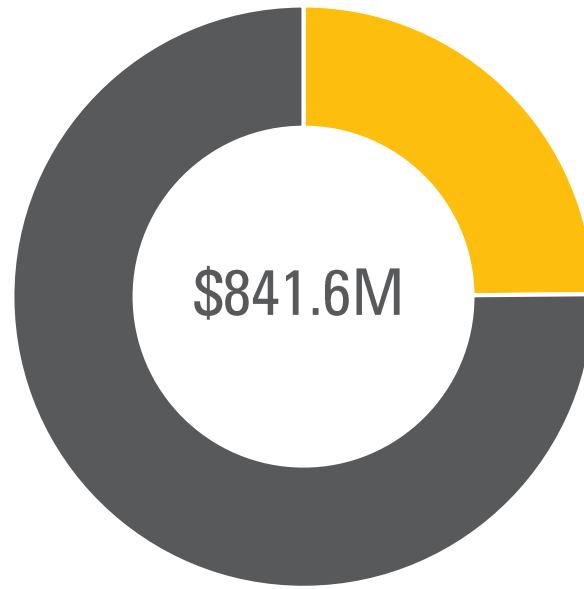
73% of total dollars raised came from the top **5** schools and units:

1. School of Medicine
2. Massey Cancer Center
3. VCU Health
4. College of Engineering
5. VCU Athletics

Top 10 Gifts

Commitment Amount	Source	Campaign Impact	School/Unit
\$46,782,121	Friend	Faculty, Research, Programs	Medicine, Massey, Health Professions, VCU Health
\$30,000,000	Foundation	Facilities	VCU Health
\$28,000,000	Foundation	Faculty, Programs	Medicine, VCU Health
\$25,000,000	Friend	Research	Engineering
\$25,000,000	Friend	Facilities	Medicine
\$16,000,000	Friend	Students, Faculty	Medicine
\$10,000,000	Friend	Students, Faculty, Programs, Unrestricted	Engineering
\$10,000,000	Alumni	Programs	Medicine
\$9,500,000	Corporation	Facilities	Medicine
\$9,000,000	Alumni	Students, Programs, Unrestricted	Business, Athletics, Massey

Top 10 Gifts



The top 10 gifts totaled **\$209.3M**

This represents **25%** of all campaign giving

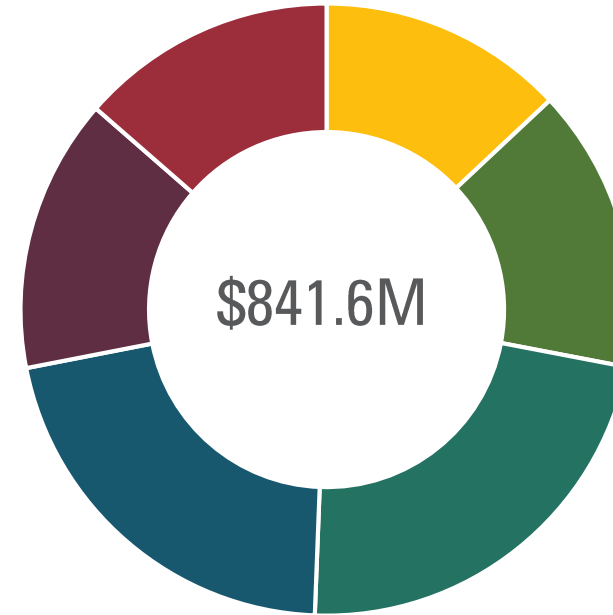
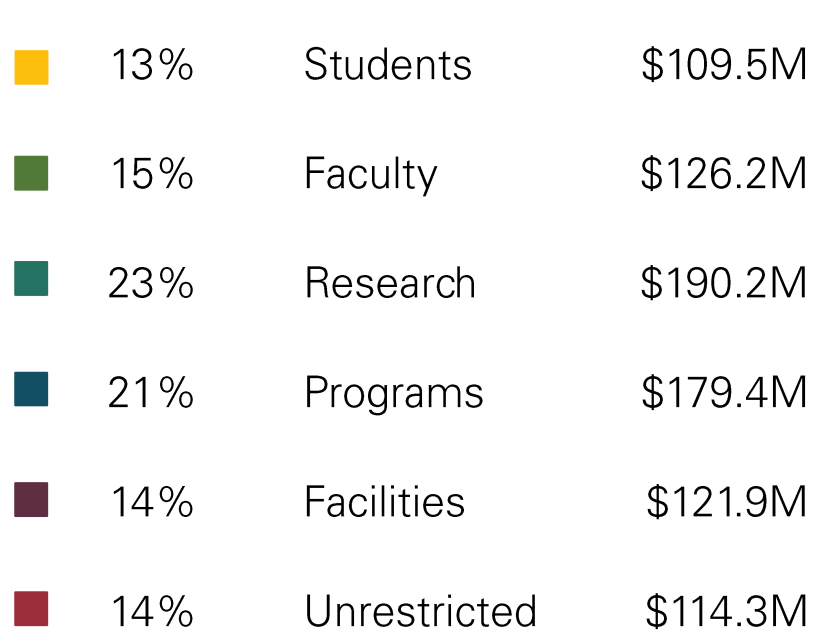
■	25%	Top 10 Gifts	\$209.3M
■	75%	All Other Giving	\$632.3M

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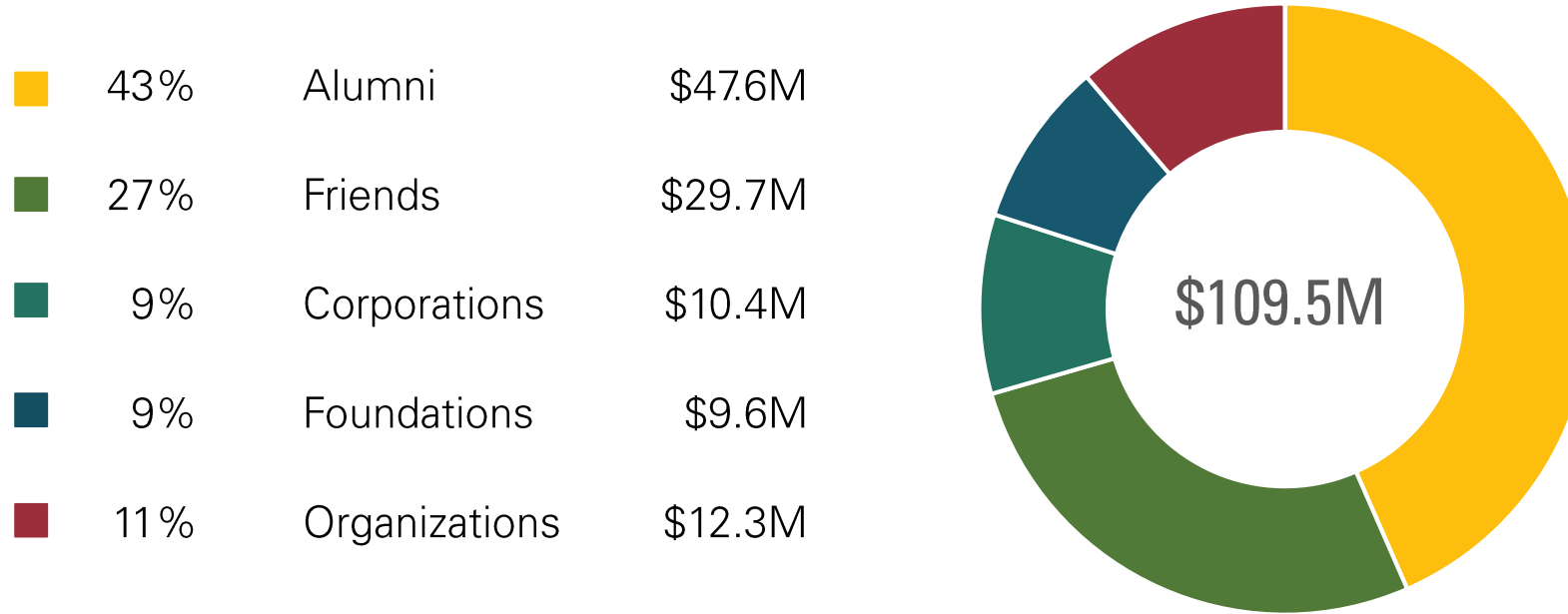
Campaign Impact



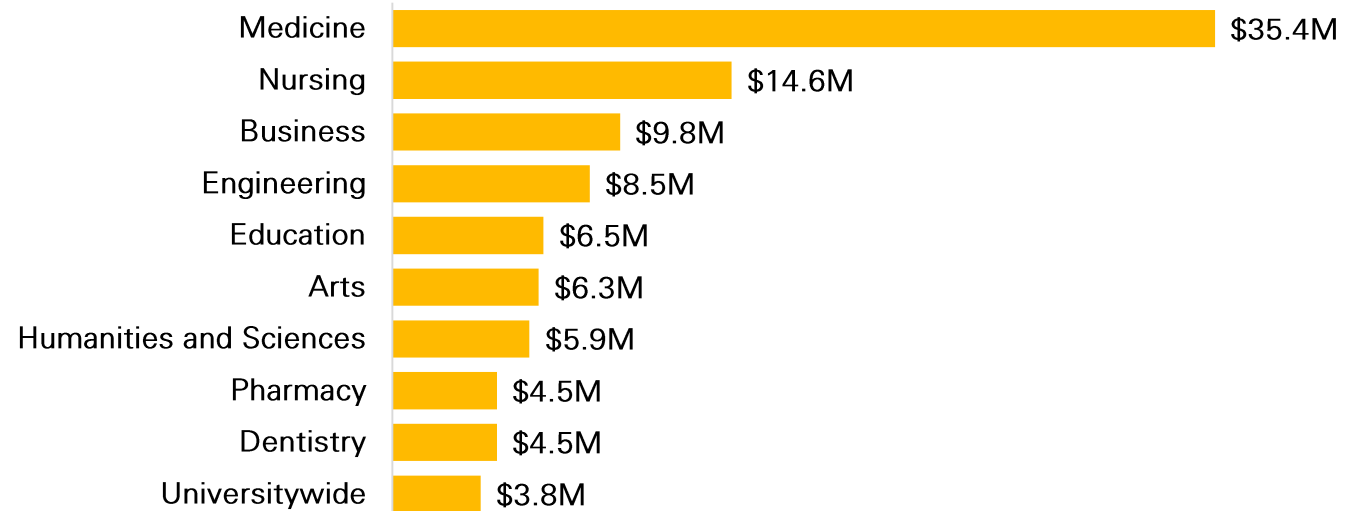
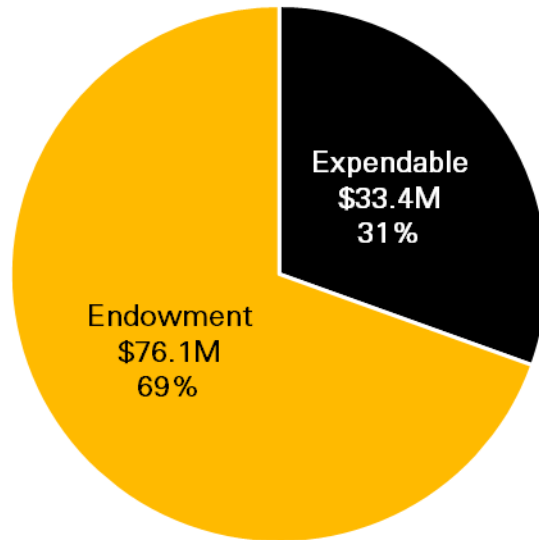
Campaign Impact



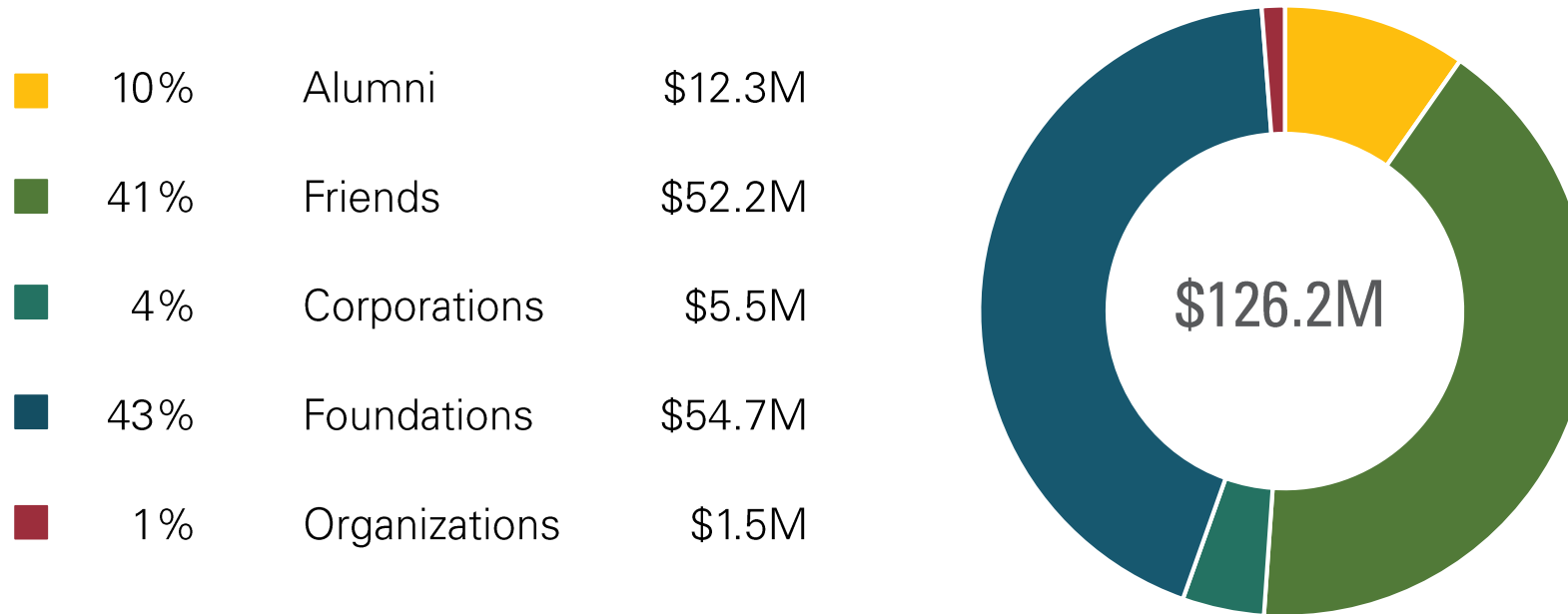
Campaign Impact on Students – Sources



Campaign Impact on Students

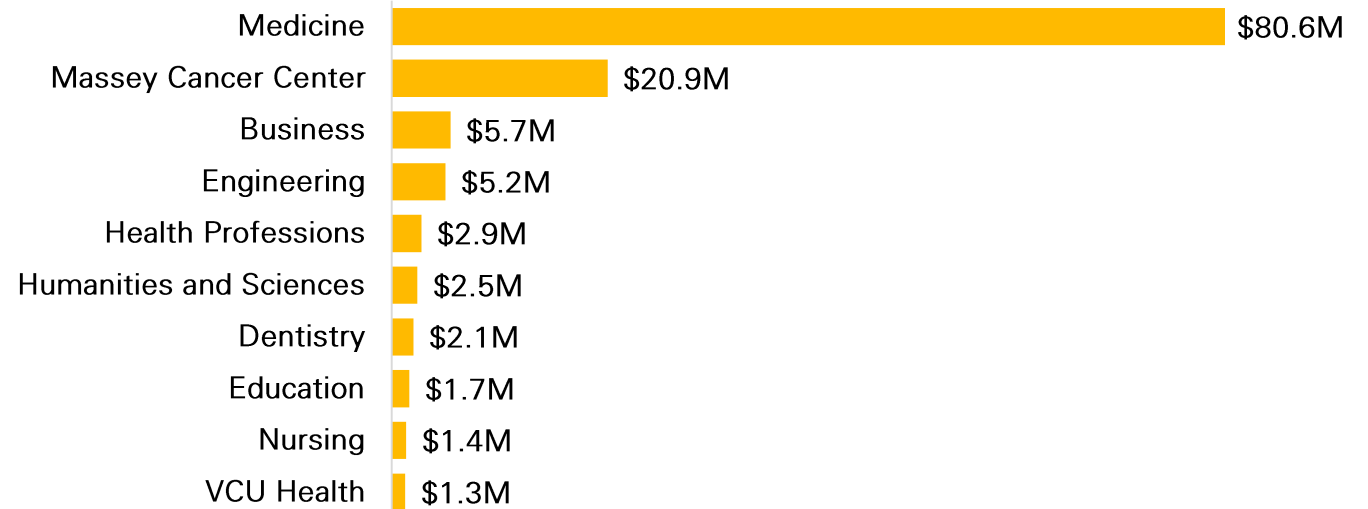
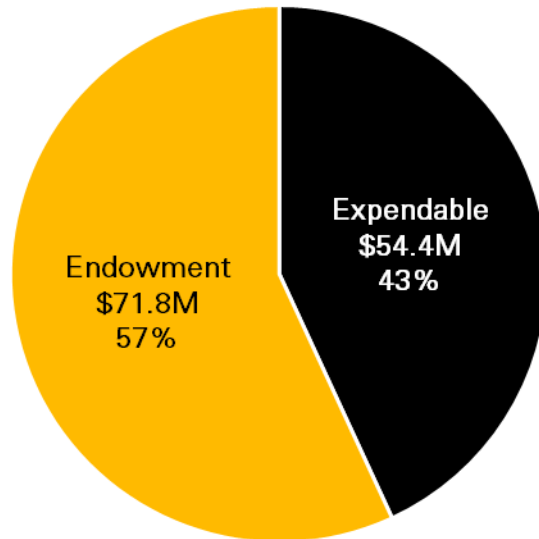


Campaign Impact on Faculty – Sources



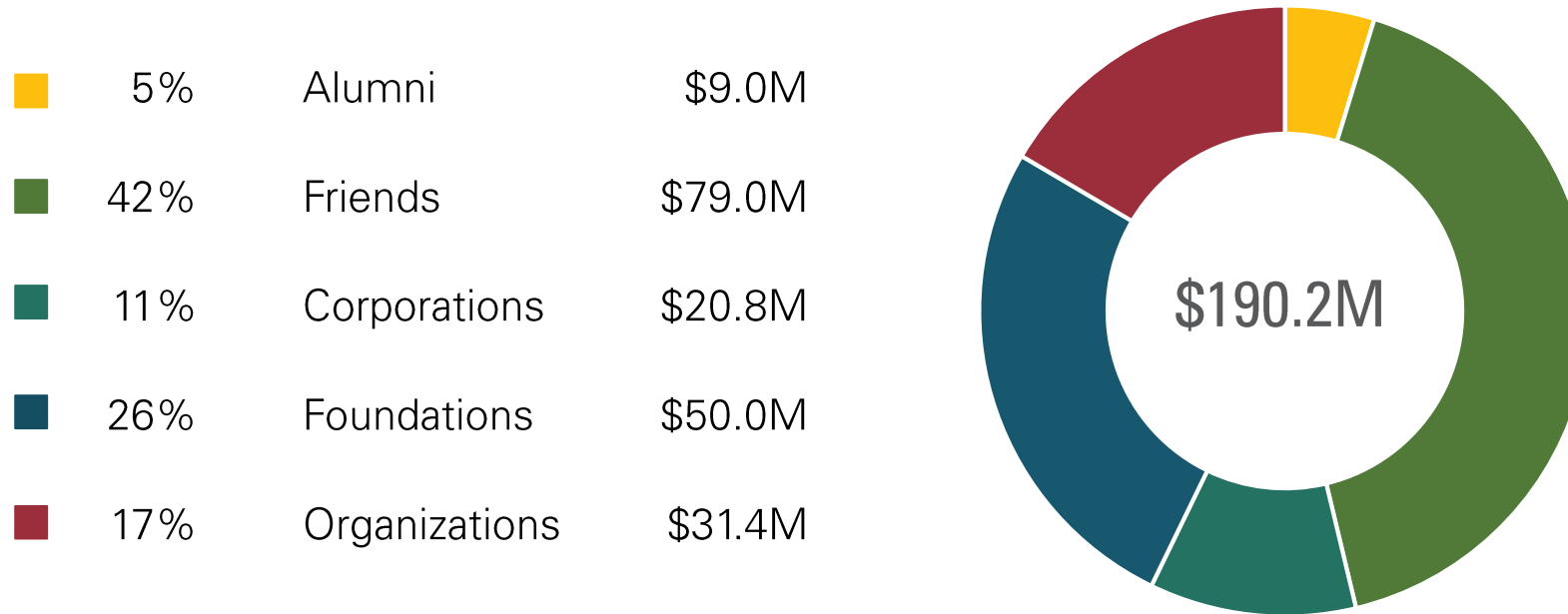
Due to rounding, some totals may not correspond with the sum of the separate figures.

Campaign Impact on Faculty



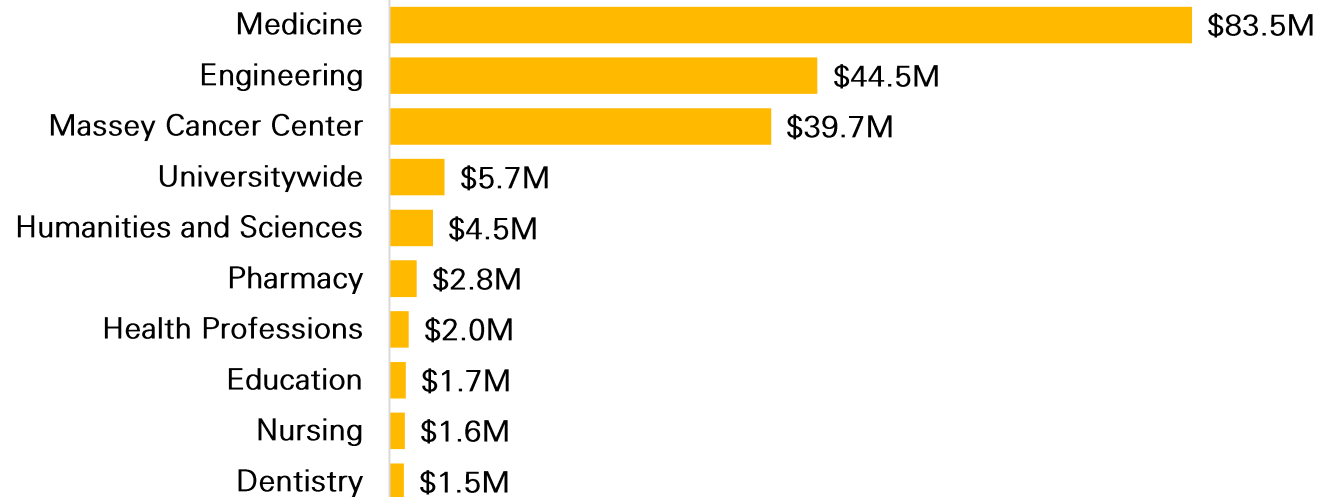
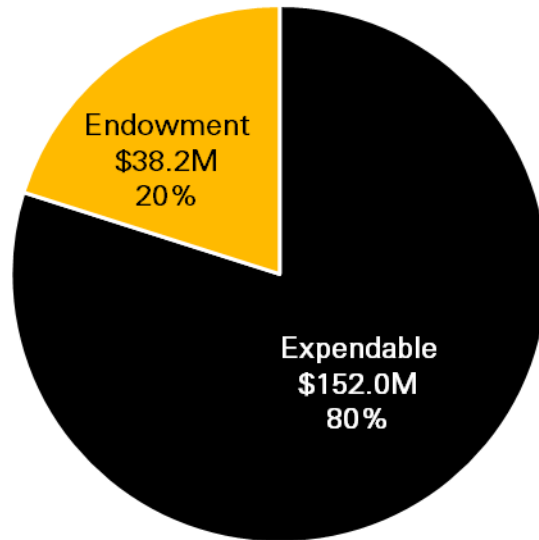
Due to rounding, some totals may not correspond with the sum of the separate figures.

Campaign Impact on Research – Sources

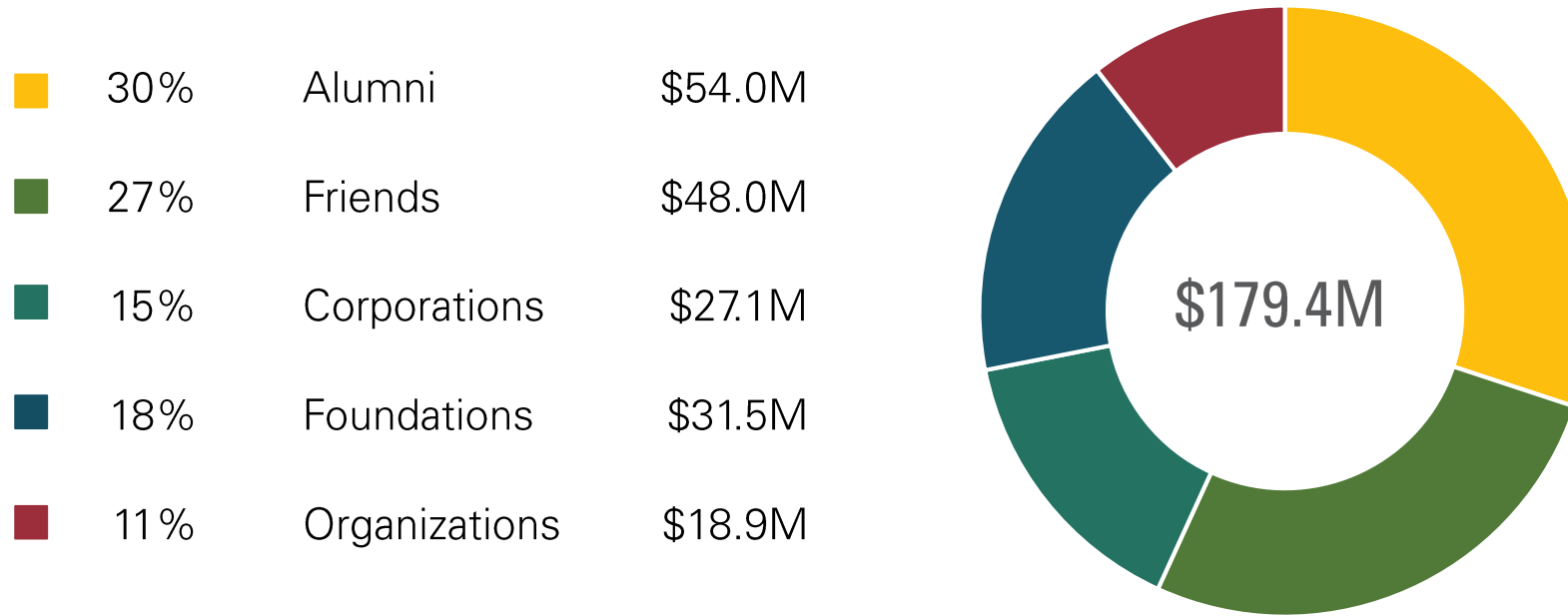


Due to rounding, some totals may not correspond with the sum of the separate figures.

Campaign Impact on Research

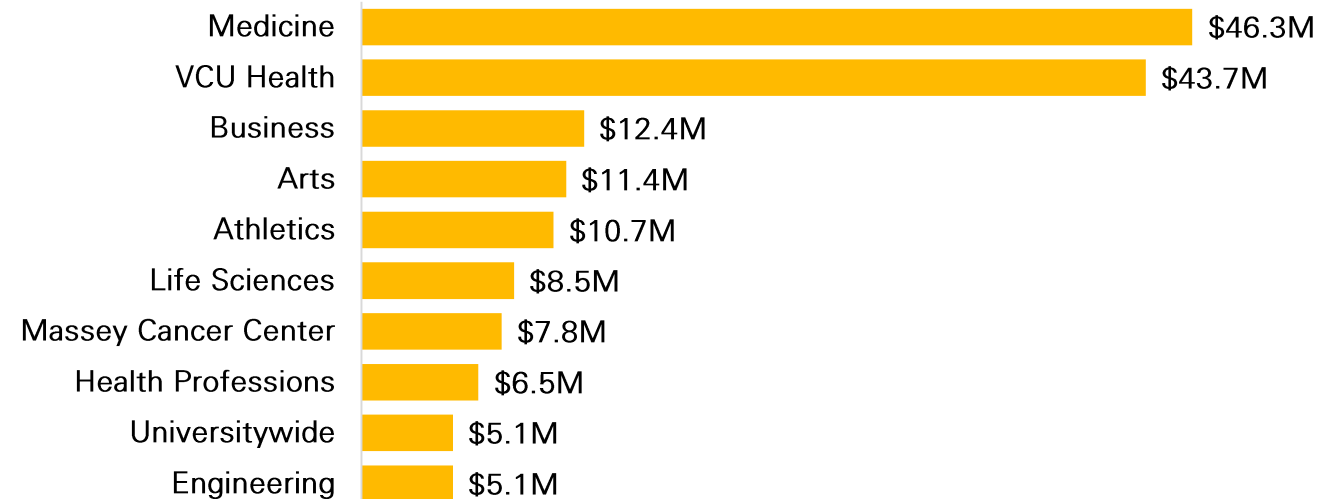
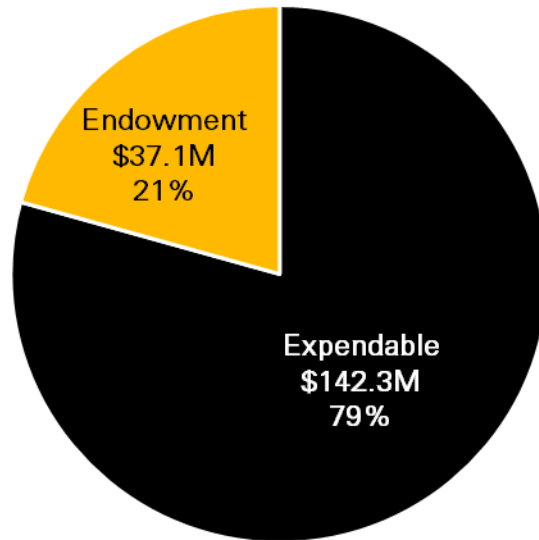


Campaign Impact on Programs – Sources



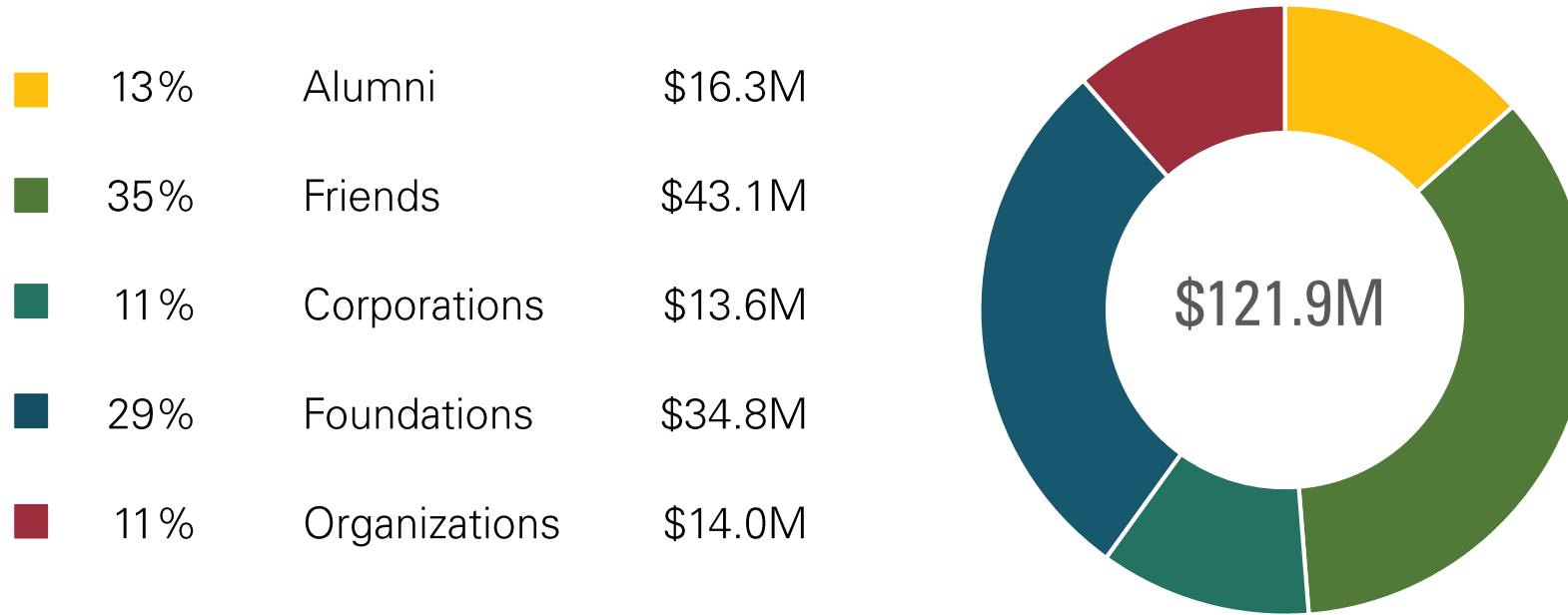
Due to rounding, some totals may not correspond with the sum of the separate figures.

Campaign Impact on Programs



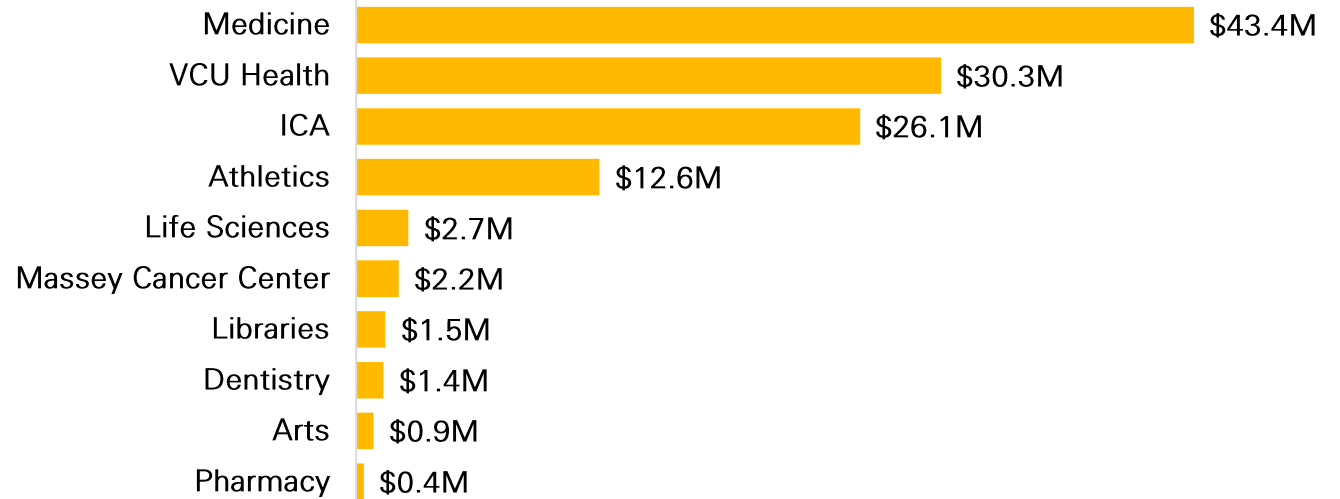
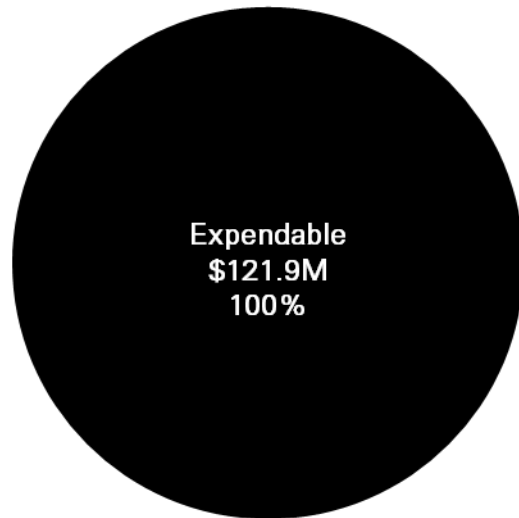
Due to rounding, some totals may not correspond with the sum of the separate figures.

Campaign Impact on Facilities – Sources



Due to rounding, some totals may not correspond with the sum of the separate figures.

Campaign Impact on Facilities



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Campaign Giving by Gift Size



Campaign Giving by Gift Size

Gift Sizes	Number of Gifts	Value of Gifts
\$25,000,000+	5	\$154,782,121
\$10,000,000 - \$24,999,999	3	\$36,000,000
\$5,000,000 - \$9,999,999	7	\$47,928,557
\$2,500,000 - \$4,999,999	22	\$68,127,949
\$1,000,000 - \$2,499,999	94	\$123,269,073
\$500,000 - \$999,999	120	\$74,670,769
\$250,000 - \$499,999	190	\$61,108,427
\$100,000 - \$249,999	585	\$80,591,684
\$50,000 - \$99,999	734	\$45,588,570
\$25,000 - \$49,999	1,158	\$35,386,818
\$1,000 - \$24,999	28,186	\$91,743,153
< \$1,000	219,516	\$22,409,482
Total	250,620	\$841,606,604

Giving Levels	Range
Principal Giving	\$1,000,000+
Major Giving	\$25,000-\$999,999
Leadership Annual Giving	\$1,000-\$24,999
Annual Giving	<\$1,000



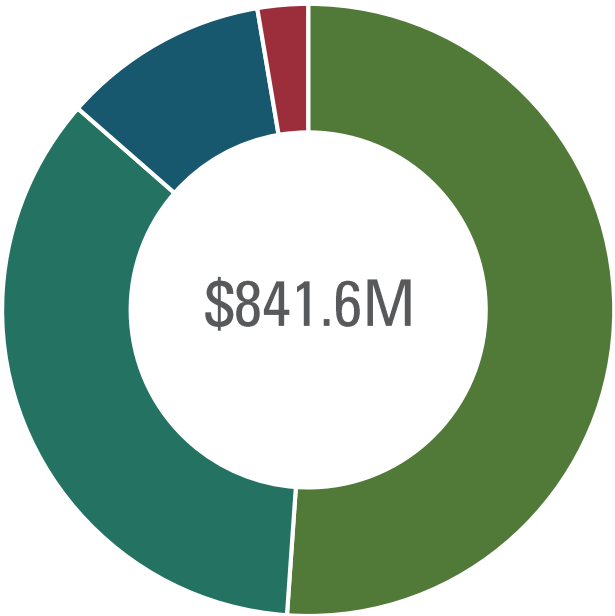
Due to rounding, some totals may not correspond with the sum of the separate figures.

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Campaign Giving by Gift Size

250,620 Total Gifts

■	51 %	Principal Giving	\$430.1M
■	35 %	Major Giving	\$297.3M
■	11 %	Leadership Annual Giving	\$91.7M
■	3 %	Annual Giving	\$22.4M



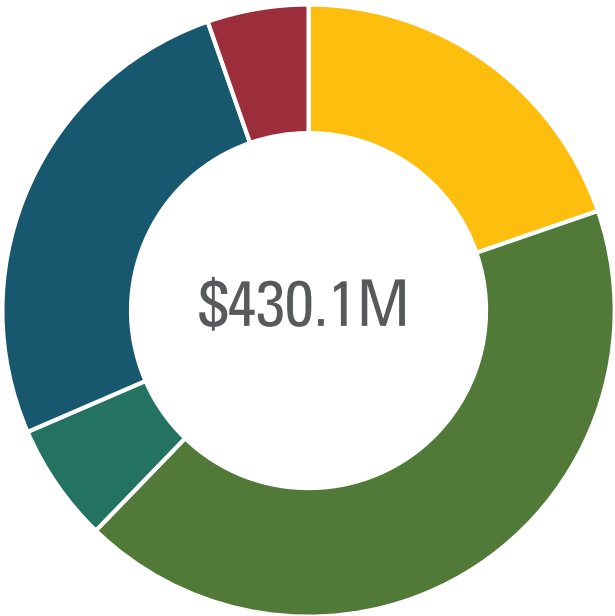
Giving Levels	Range
Principal Giving	\$1,000,000+
Major Giving	\$25,000-\$999,999
Leadership Annual Giving	\$1,000-\$24,999
Annual Giving	<\$1,000

Due to rounding, some totals may not correspond with the sum of the separate figures.

Principal Giving – Sources

131 Principal Gifts

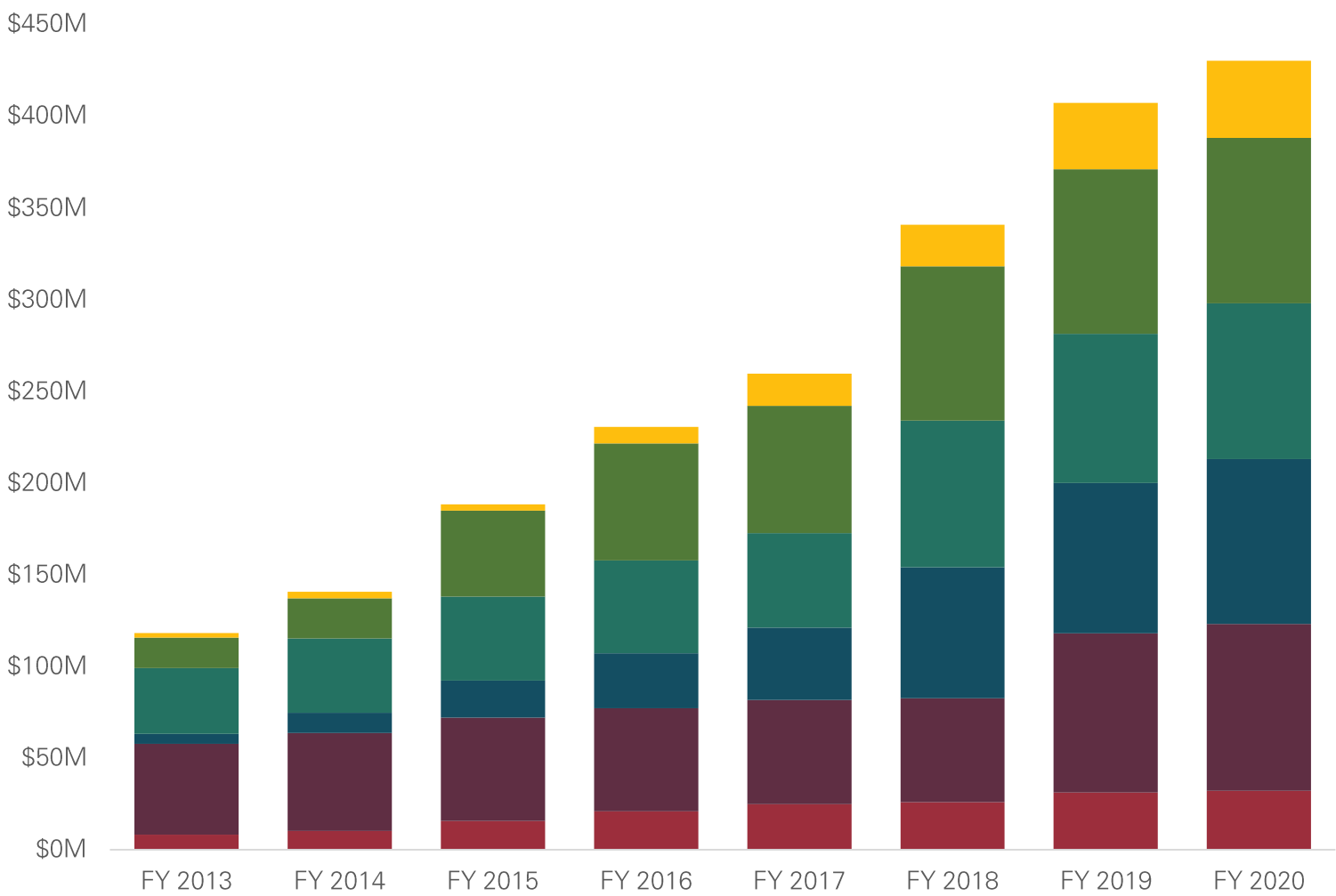
<div></div>	20%	Alumni	\$84.8M
<div></div>	43%	Friends	\$182.8M
<div></div>	6%	Corporations	\$27.0M
<div></div>	26%	Foundations	\$112.4M
<div></div>	5%	Organizations	\$23.0M



Giving Levels	Range
Principal Giving	\$1,000,000+
Major Giving	\$25,000-\$999,999
Leadership Annual Giving	\$1,000-\$24,999
Annual Giving	<\$1,000

Due to rounding, some totals may not correspond with the sum of the separate figures.

Principal Giving – Impact



131 Principal Gifts

10%	Students	\$42.1M
21%	Faculty	\$90.2M
20%	Research	\$84.8M
21%	Programs	\$89.9M
21%	Facilities	\$90.9M
7%	Unrestricted	\$32.2M

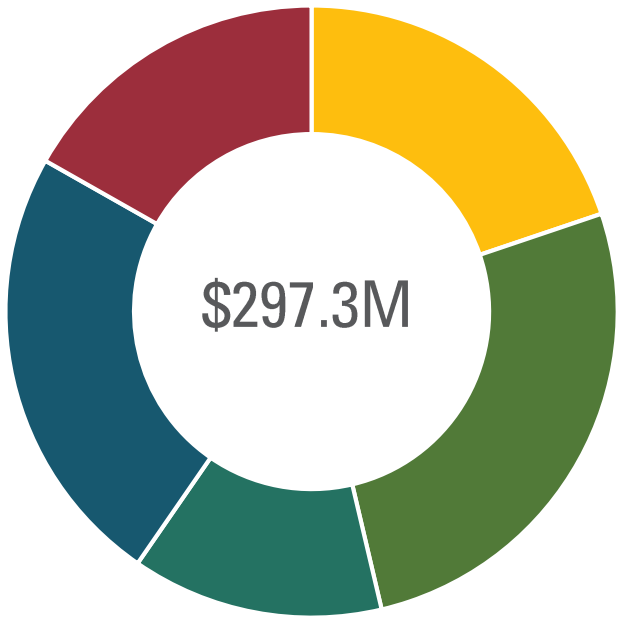
Giving Levels	Range
Principal Giving	\$1,000,000+
Major Giving	\$25,000-\$999,999
Leadership Annual Giving	\$1,000-\$24,999
Annual Giving	<\$1,000

Due to rounding, some totals may not correspond with the sum of the separate figures.

Major Giving – Sources

2,787 Major Gifts

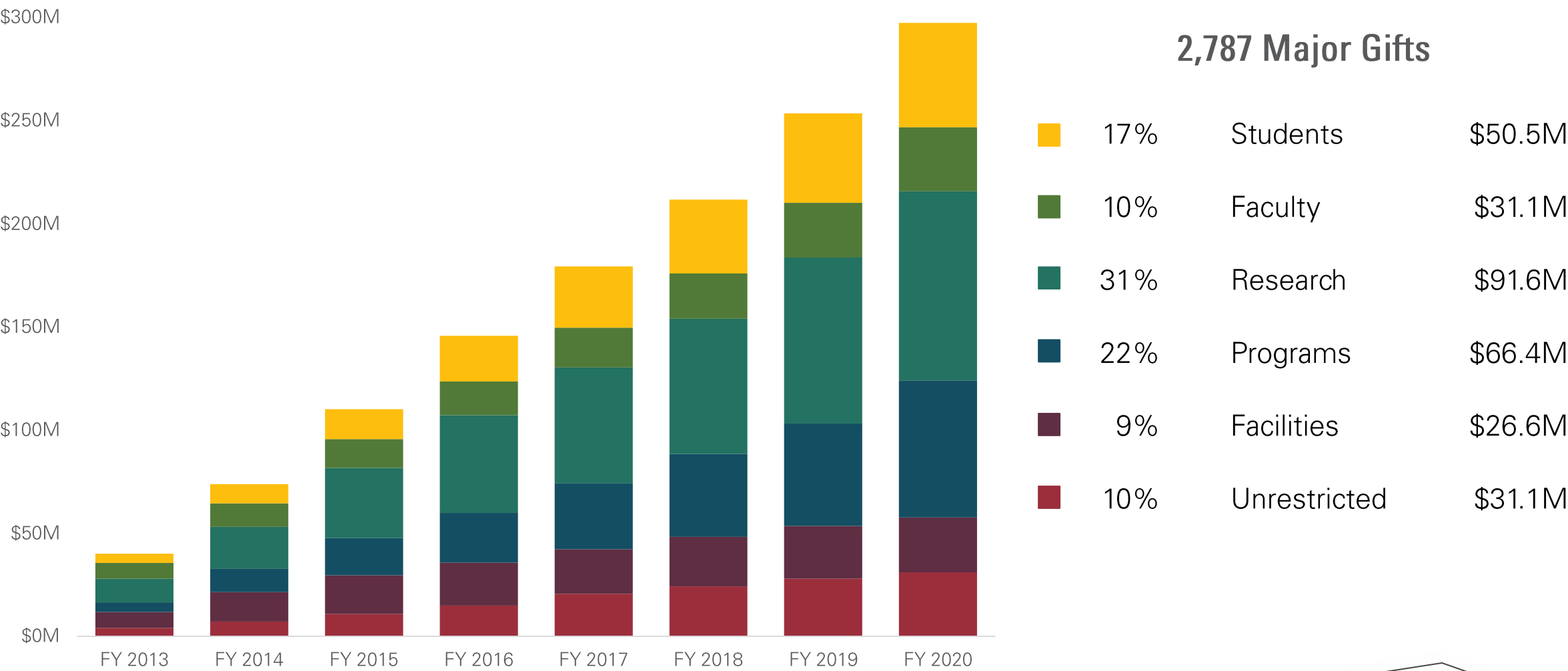
<div></div>	20%	Alumni	\$58.9M
<div></div>	26%	Friends	\$78.8M
<div></div>	13%	Corporations	\$39.6M
<div></div>	24%	Foundations	\$70.1M
<div></div>	17%	Organizations	\$49.9M



Giving Levels	Range
Principal Giving	\$1,000,000+
Major Giving	\$25,000-\$999,999
Leadership Annual Giving	\$1,000-\$24,999
Annual Giving	<\$1,000

Due to rounding, some totals may not correspond with the sum of the separate figures.

Major Giving – Impact



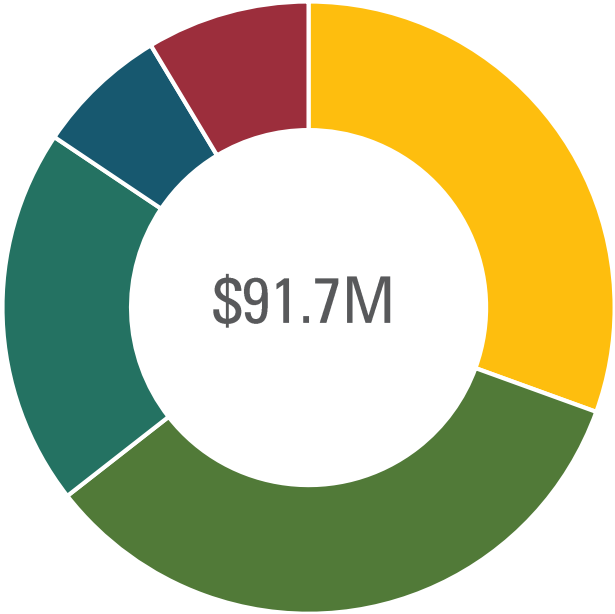
Giving Levels	Range
Principal Giving	\$1,000,000+
Major Giving	\$25,000-\$999,999
Leadership Annual Giving	\$1,000-\$24,999
Annual Giving	<\$1,000

Due to rounding, some totals may not correspond with the sum of the separate figures.

Leadership Annual Giving – Sources

28,186 Leadership Annual Gifts

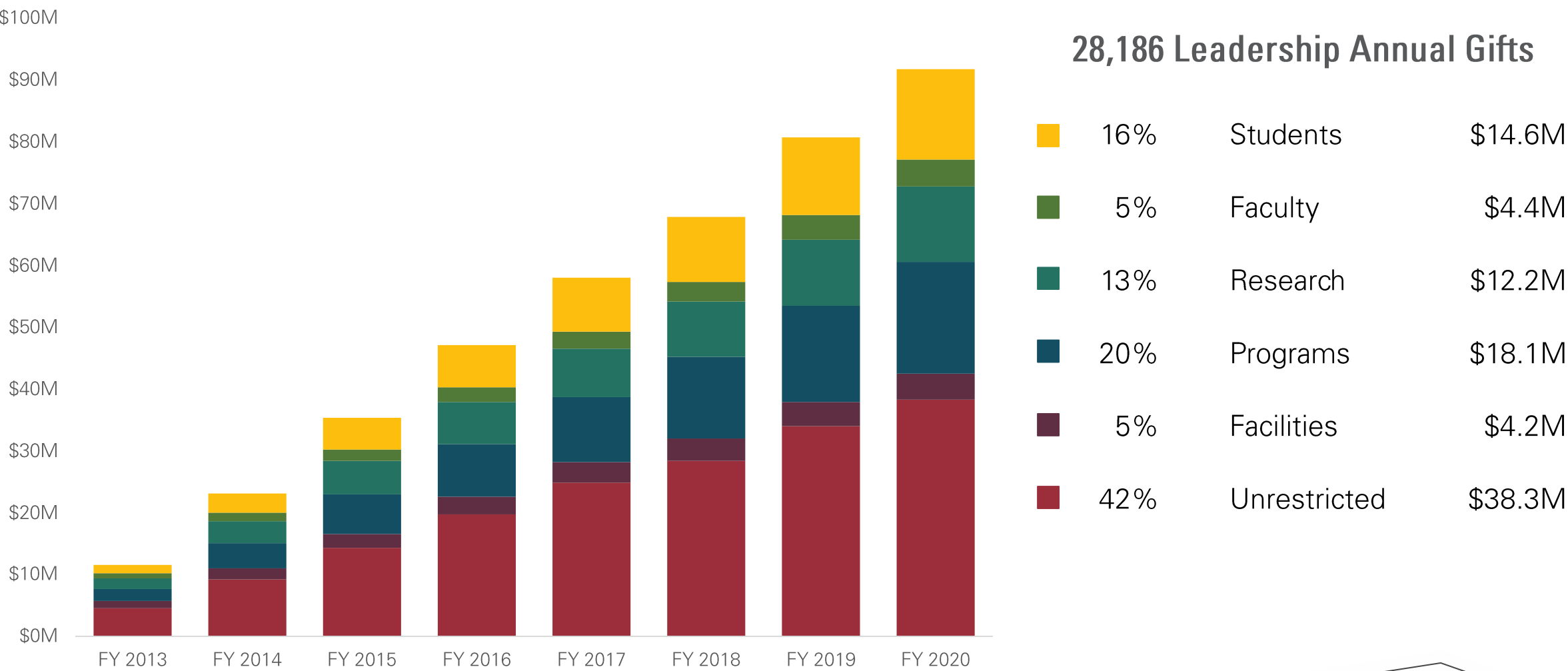
31%	Alumni	\$28.0M
34%	Friends	\$31.1M
20%	Corporations	\$18.3M
7%	Foundations	\$6.4M
9%	Organizations	\$7.9M



Giving Levels	Range
Principal Giving	\$1,000,000+
Major Giving	\$25,000-\$999,999
Leadership Annual Giving	\$1,000-\$24,999
Annual Giving	<\$1,000

Due to rounding, some totals may not correspond with the sum of the separate figures.

Leadership Annual Giving – Impact



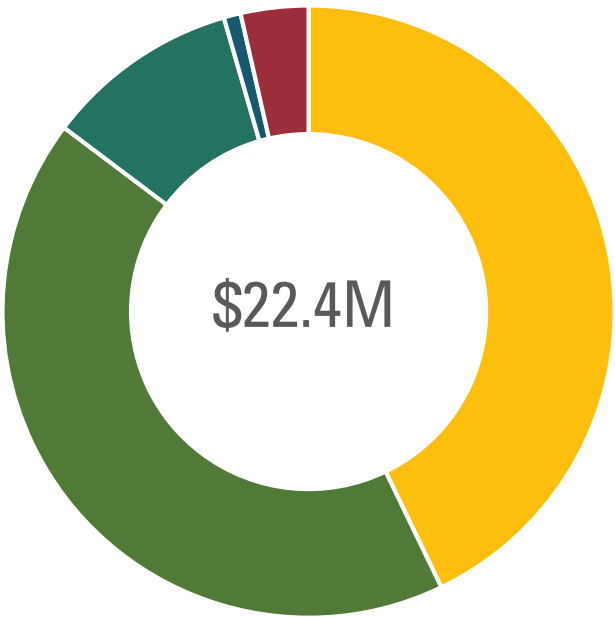
Giving Levels	Range
Principal Giving	\$1,000,000+
Major Giving	\$25,000-\$999,999
Leadership Annual Giving	\$1,000-\$24,999
Annual Giving	<\$1,000

Due to rounding, some totals may not correspond with the sum of the separate figures.

Annual Giving – Sources

219,516 Annual Gifts

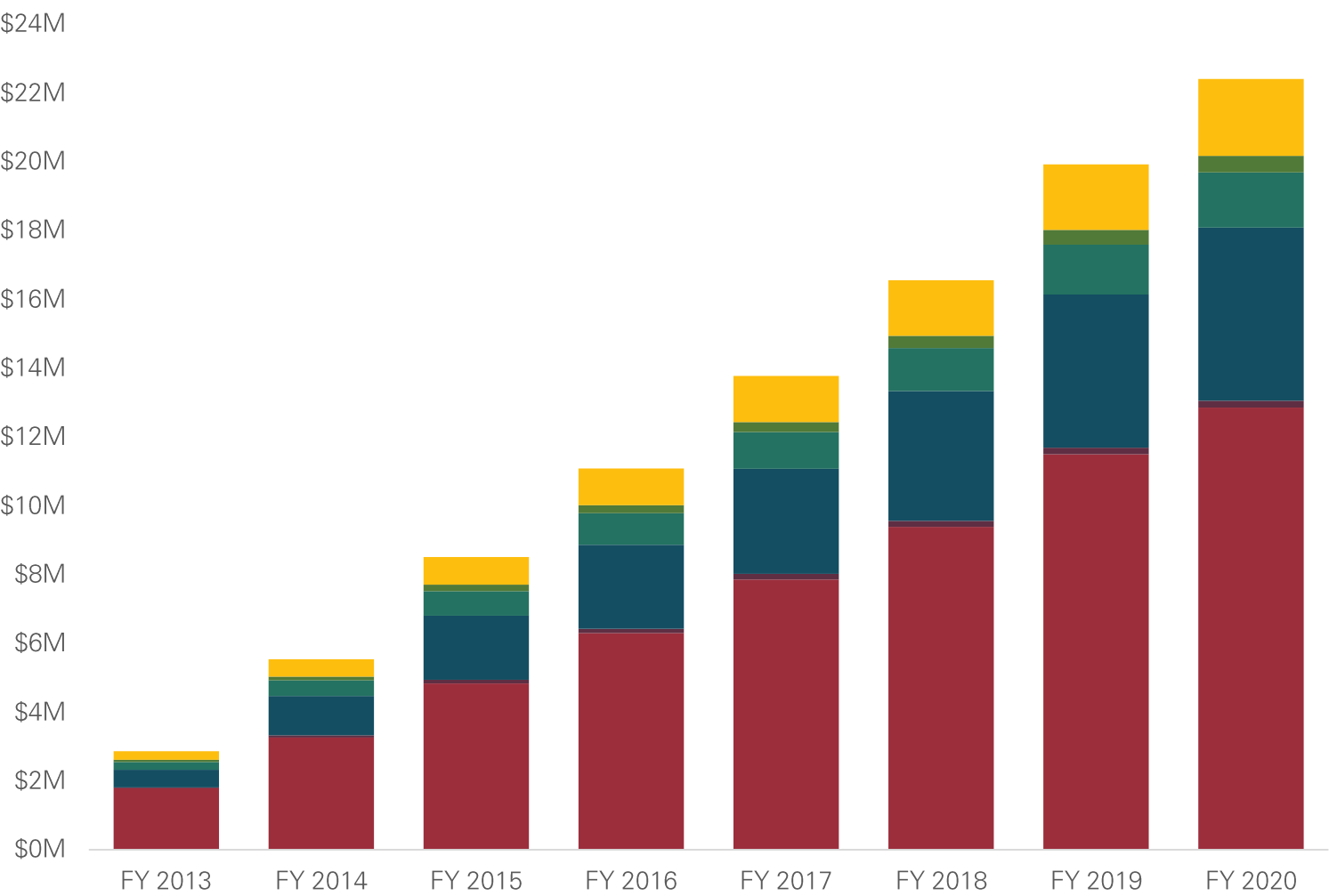
<div></div>	43%	Alumni	\$9.6M
<div></div>	42%	Friends	\$9.5M
<div></div>	10%	Corporations	\$2.3M
<div></div>	1%	Foundations	\$0.2M
<div></div>	4%	Organizations	\$0.8M



Giving Levels	Range
Principal Giving	\$1,000,000+
Major Giving	\$25,000-\$999,999
Leadership Annual Giving	\$1,000-\$24,999
Annual Giving	<\$1,000

Due to rounding, some totals may not correspond with the sum of the separate figures.

Annual Giving – Impact



219,516 Annual Gifts

10%	Students	\$2.2M
2%	Faculty	\$0.5M
7%	Research	\$1.6M
22%	Programs	\$5.0M
1%	Facilities	\$0.2M
57%	Unrestricted	\$12.9M

Giving Levels	Range
Principal Giving	\$1,000,000+
Major Giving	\$25,000-\$999,999
Leadership Annual Giving	\$1,000-\$24,999
Annual Giving	<\$1,000

Due to rounding, some totals may not correspond with the sum of the separate figures.

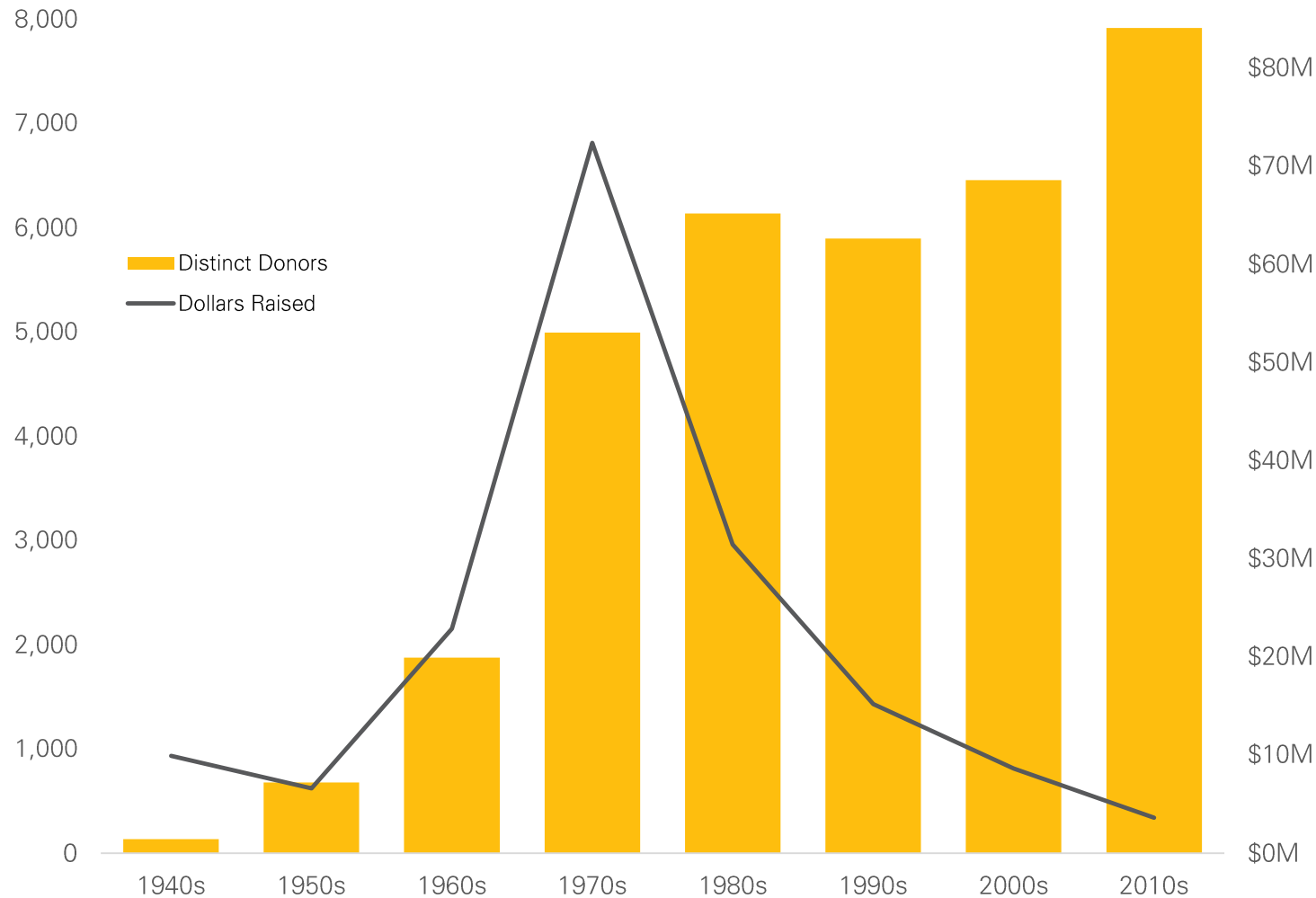
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Campaign Giving by Alumni Decade



VCU

Campaign Giving by Alumni Decade



33,601 alumni donated to VCU during the campaign

Alumni graduating in the **2010s** made the most gifts (**7,917**), while alumni from the **1970s** donated the most dollars (**\$72.4M**)



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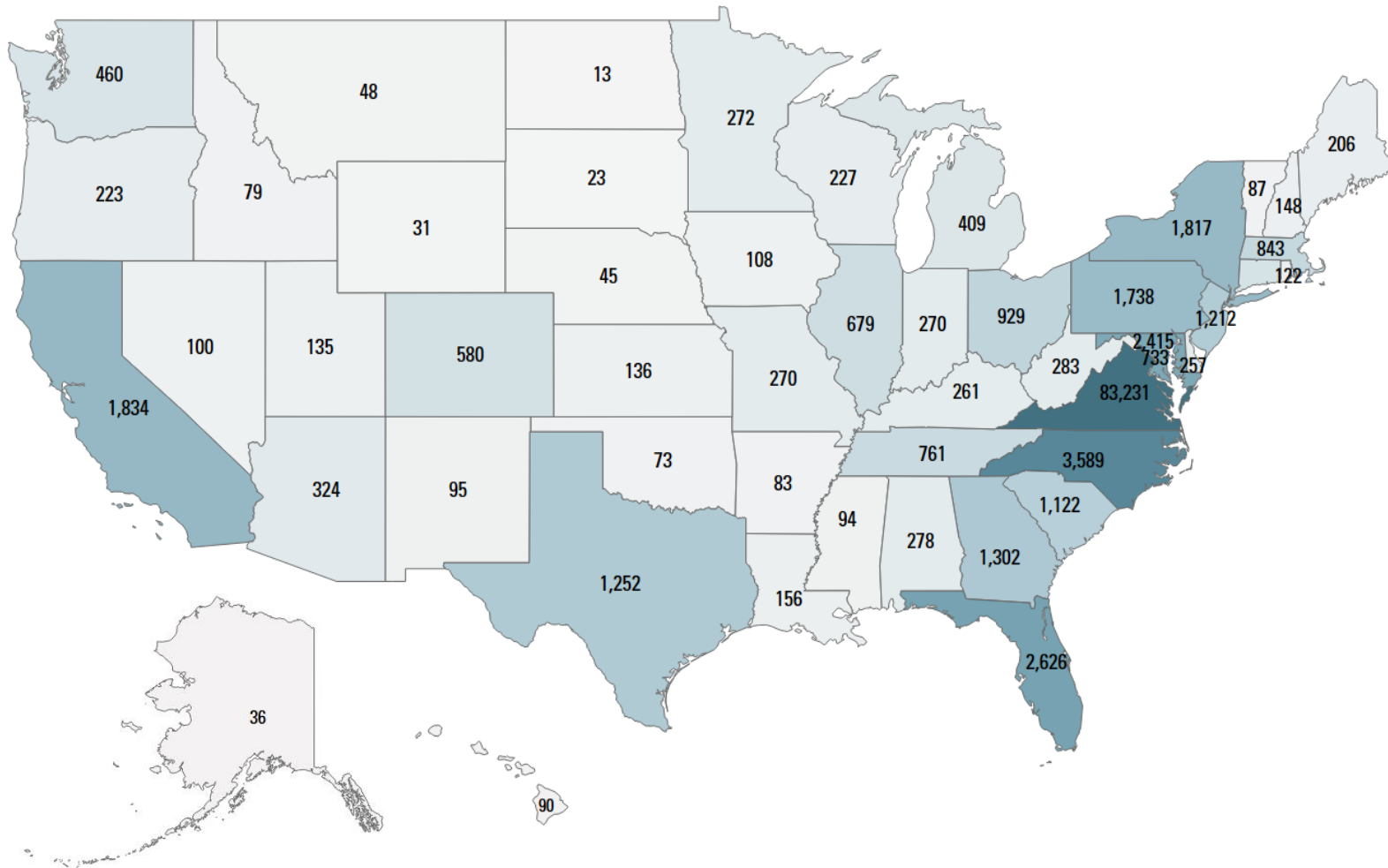
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Campaign Giving by Geography



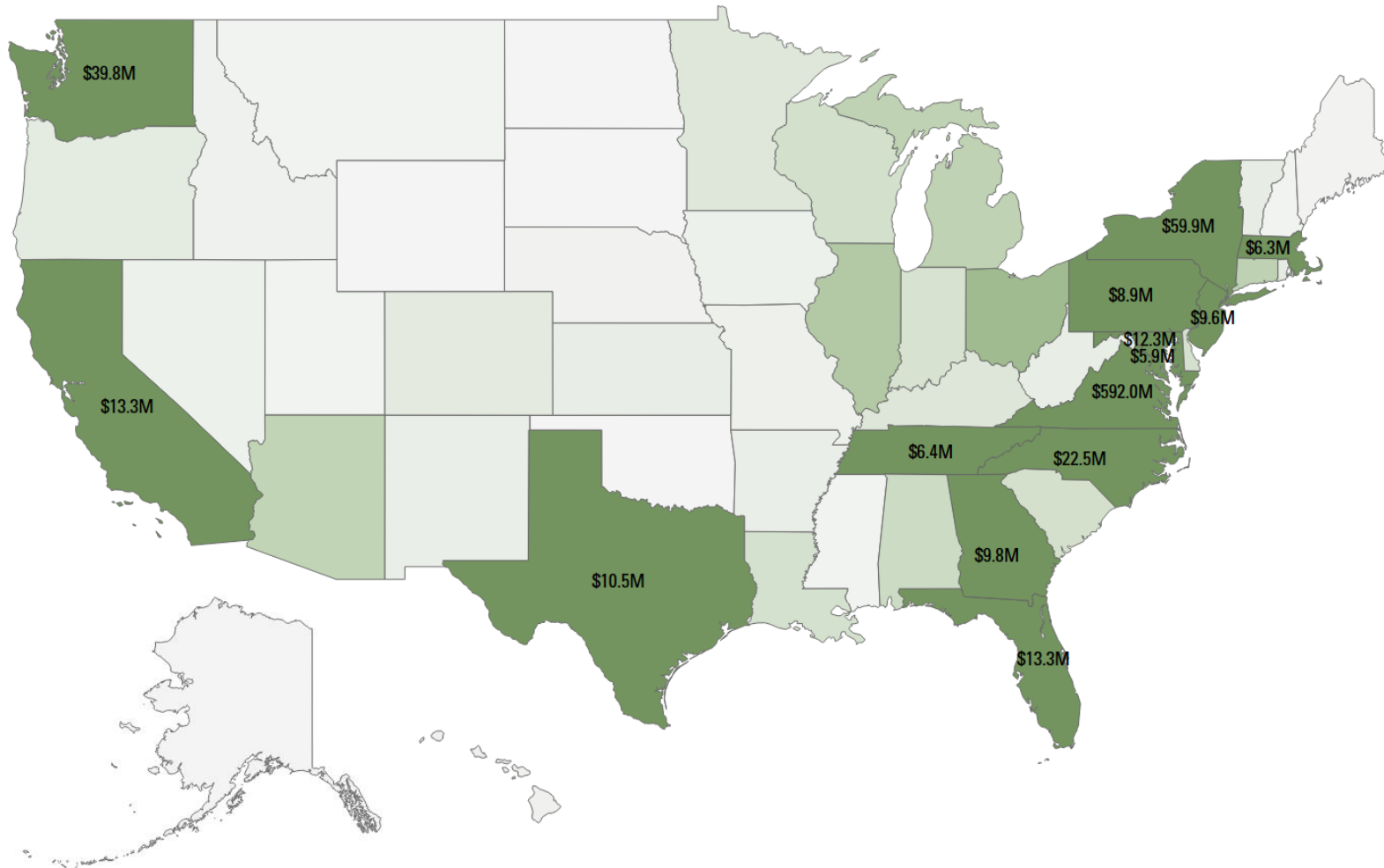
Campaign Giving by Geography



The Make It Real Campaign for VCU had **donors in every US state**

83,231 donors live in Virginia representing **74%** of all campaign donors

Campaign Giving by Geography



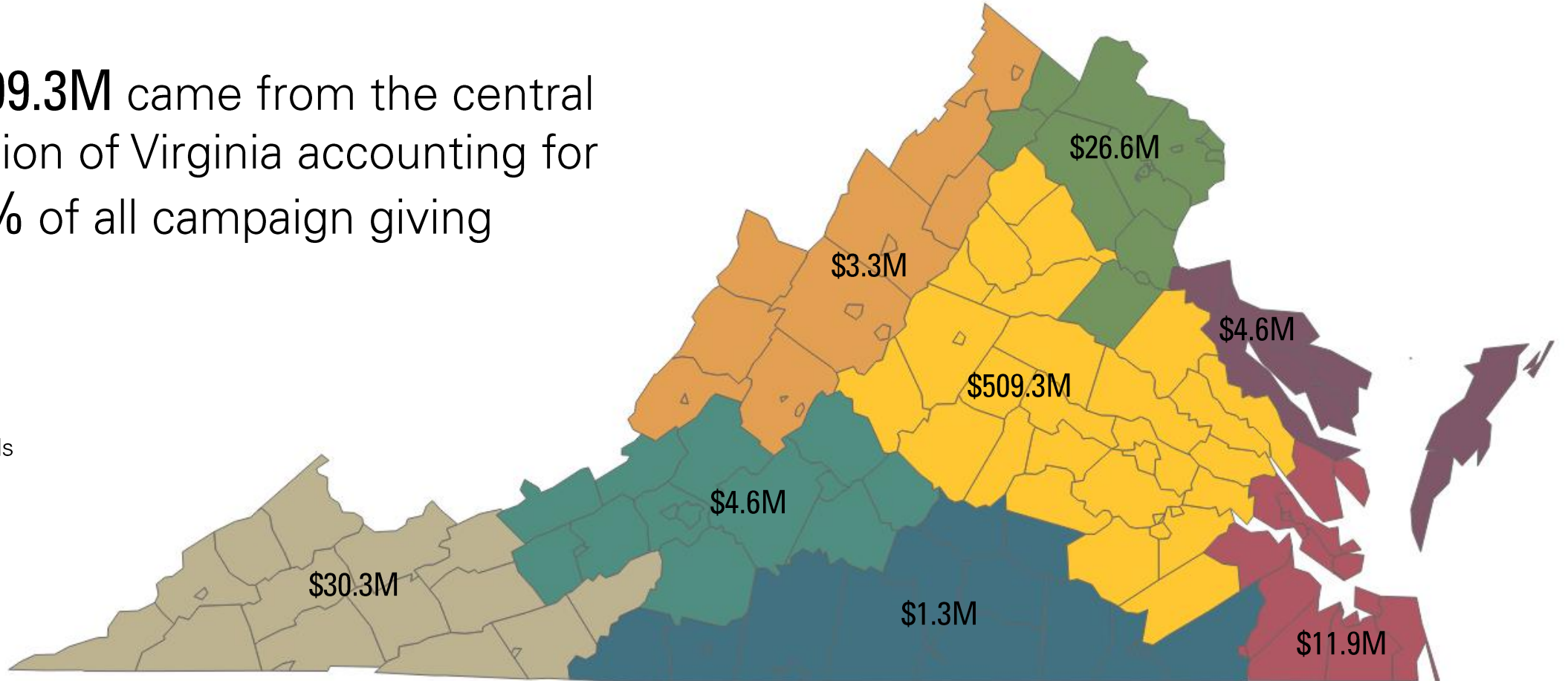
13 states and DC had **\$5.0M+** giving

70% of campaign giving came from donors living in Virginia with gifts totaling **\$592.0M**

Campaign Giving by Geography

\$509.3M came from the central region of Virginia accounting for **61%** of all campaign giving

- Central
- Eastern
- Hampton Roads
- Northern
- Southside
- Southwest
- Valley
- West Central



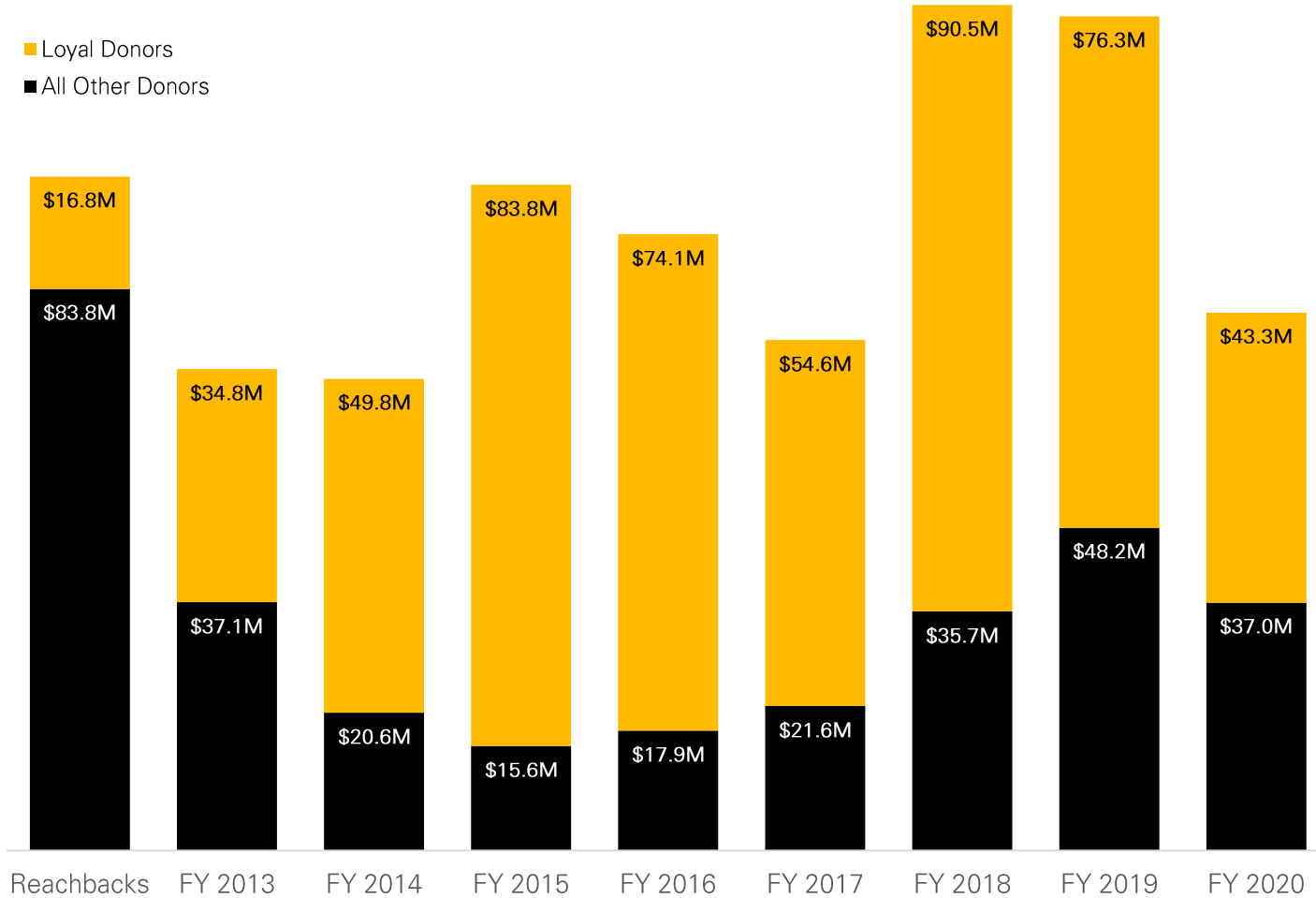
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Campaign Donors



Loyal Donors

■ Loyal Donors
■ All Other Donors



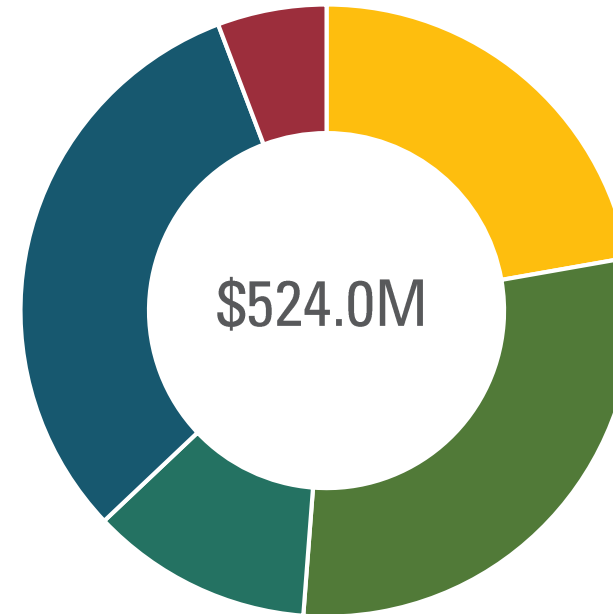
Loyal donors are donors who gave for 3+ consecutive years during the campaign

14,258 loyal donors contributed **\$524.0M**

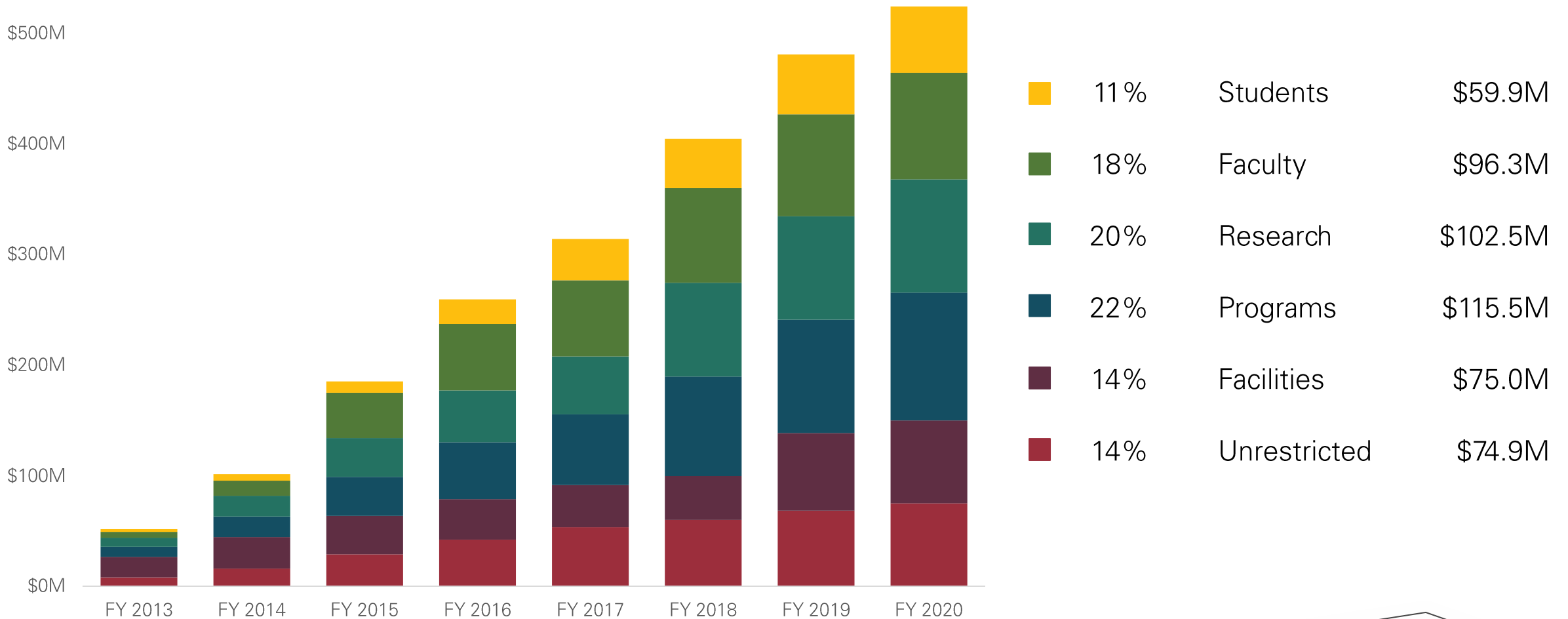
This represents **62%** of all campaign giving

Loyal Donors – Sources

■	22%	Alumni	\$116.5M
■	29%	Friends	\$151.9M
■	12%	Corporations	\$61.5M
■	31%	Foundations	\$164.0M
■	6%	Organizations	\$30.2M



Loyal Donors – Impact

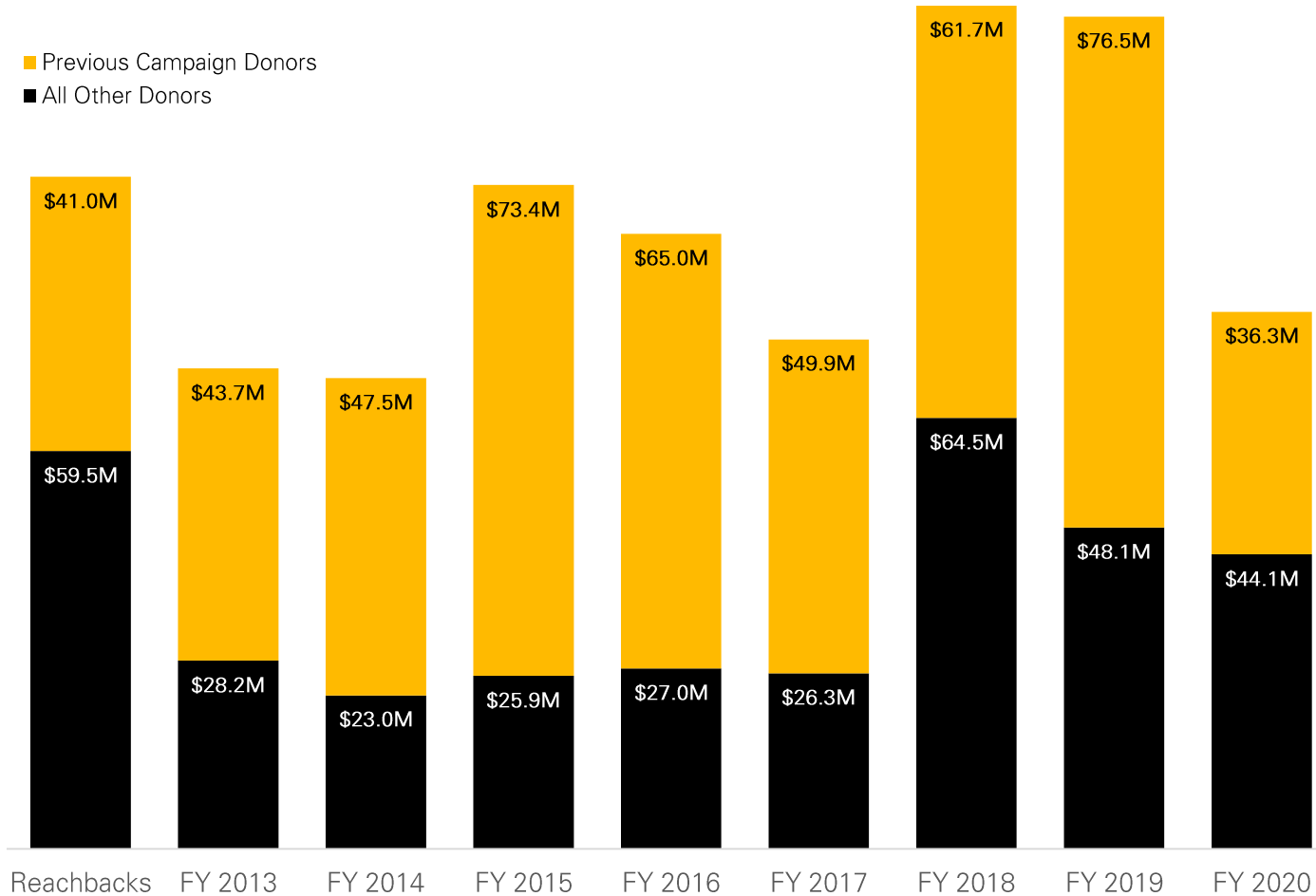


Due to rounding, some totals may not correspond with the sum of the separate figures.

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Previous Campaign Donors

■ Previous Campaign Donors
■ All Other Donors



Previous campaign donors are donors who gave to The Campaign for VCU (FY 2000 - FY 2007)

16,738 previous campaign donors contributed **\$495.0M**

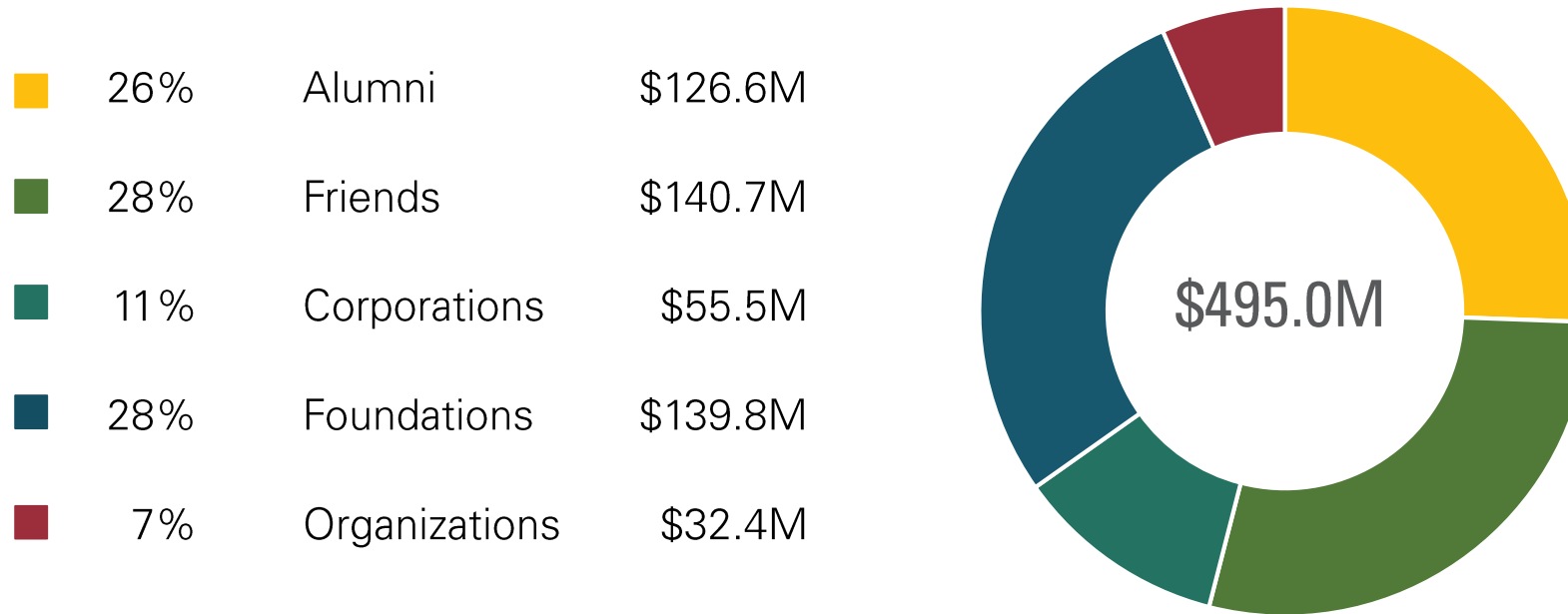
This represents **59%** of all campaign giving



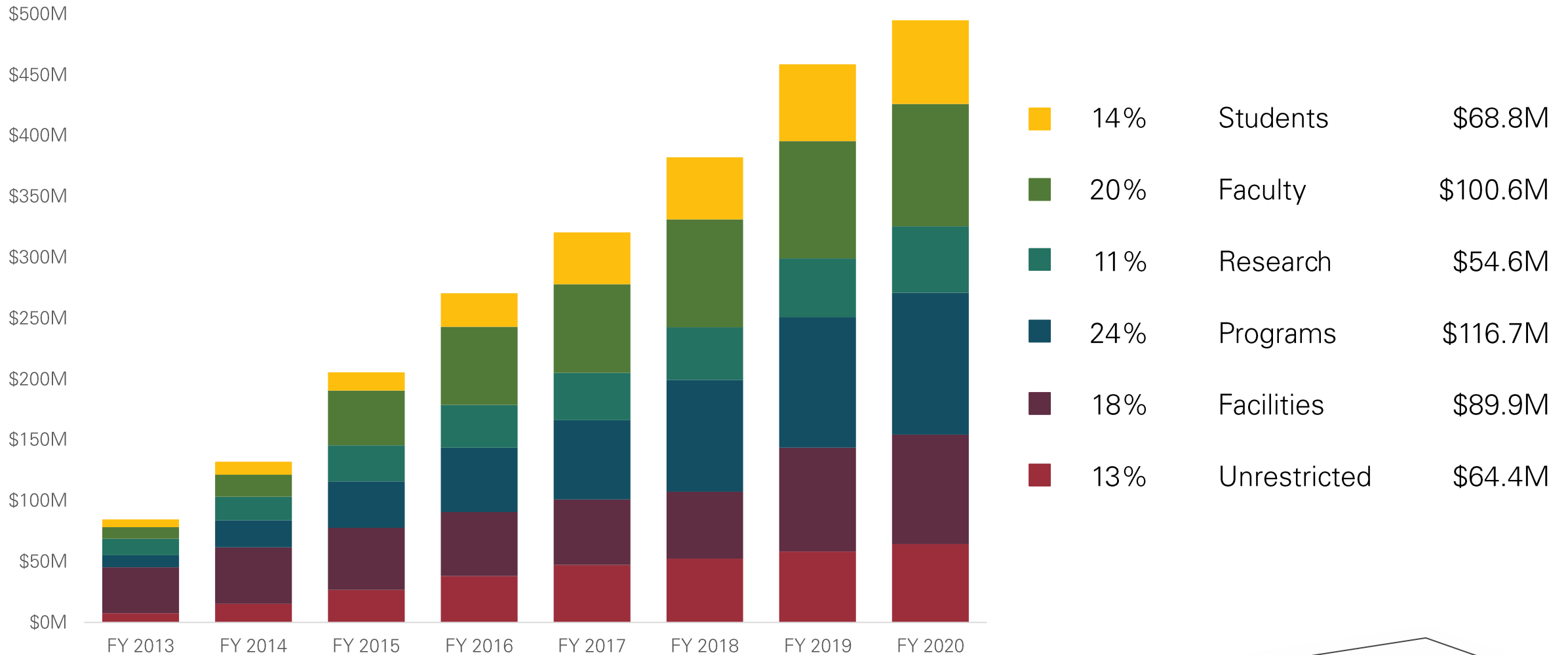
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Previous Campaign Donors – Sources



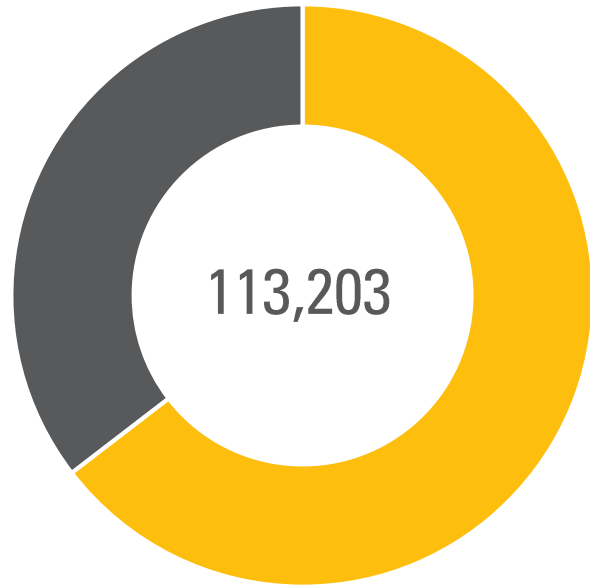
Previous Campaign Donors – Impact



Due to rounding, some totals may not correspond with the sum of the separate figures.

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First-time Donors

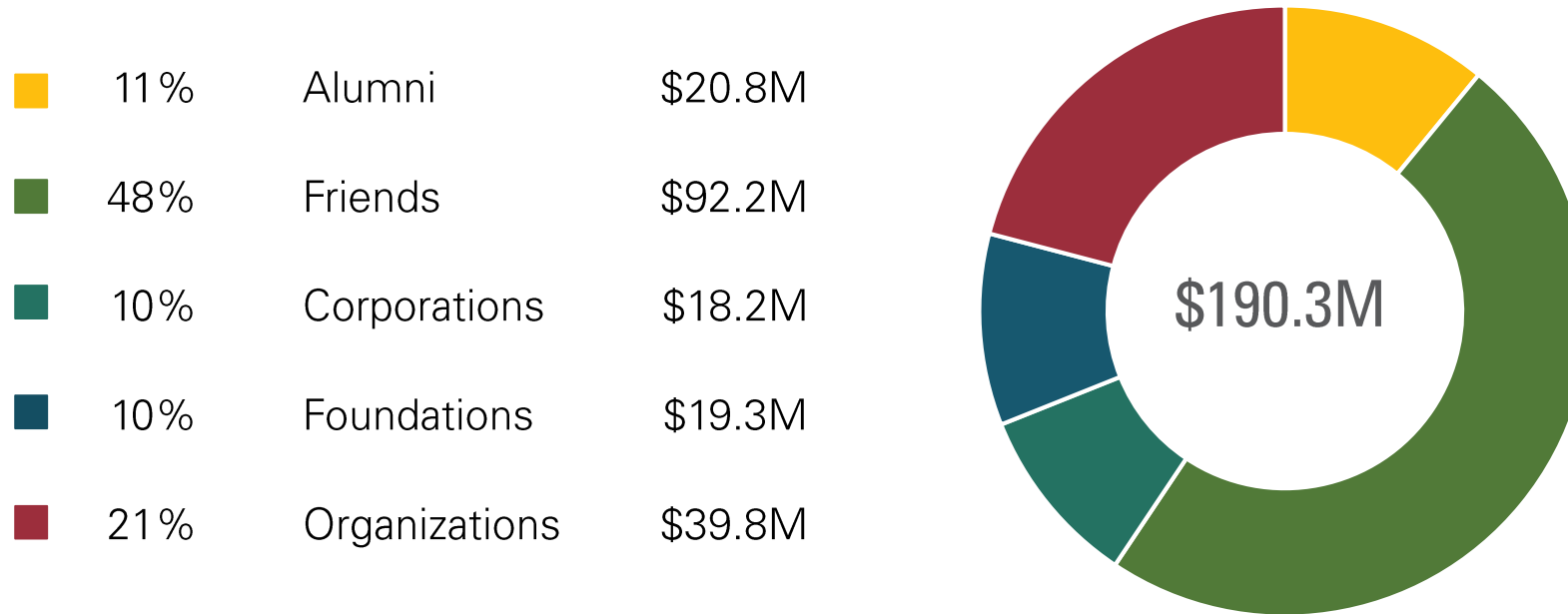


73,100 first-time donors
contributed **\$190.3M**

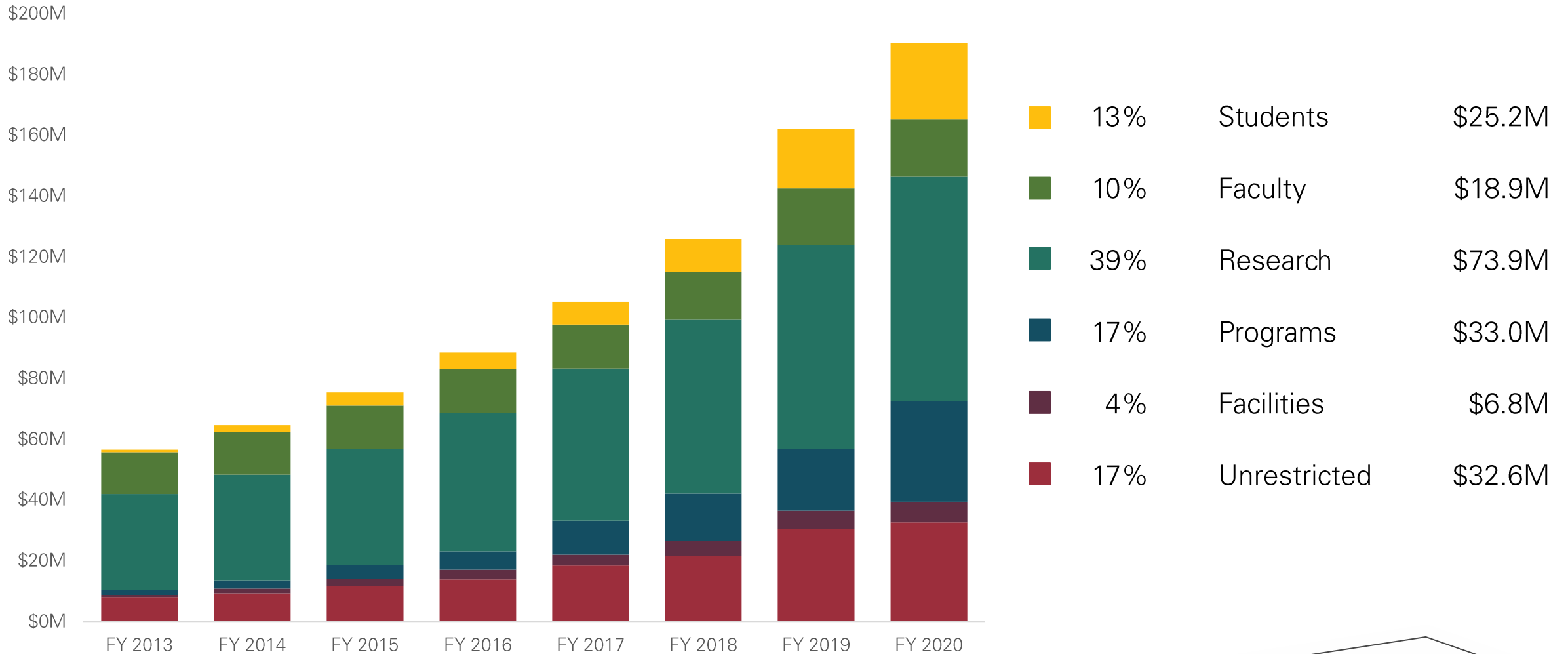
This represents **65%** of total
donors and **23%** of all campaign
giving

■ 65%	First-time Donors	73,100
■ 35%	All Other Donors	40,103

First-time Donors – Sources



First-time Donors – Impact



Due to rounding, some totals may not correspond with the sum of the separate figures.

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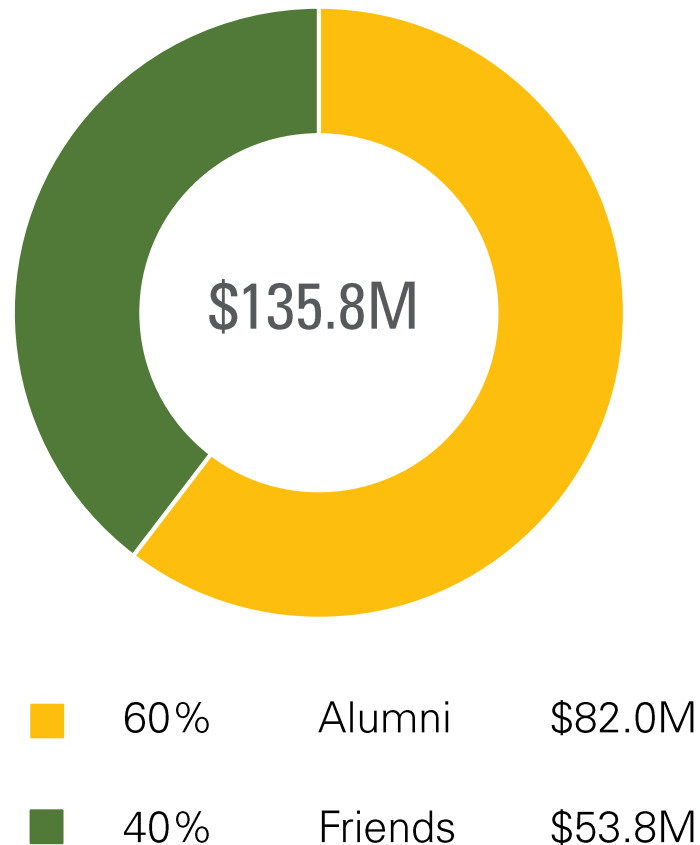


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Opportunities for the Future



Planned Giving – Sources

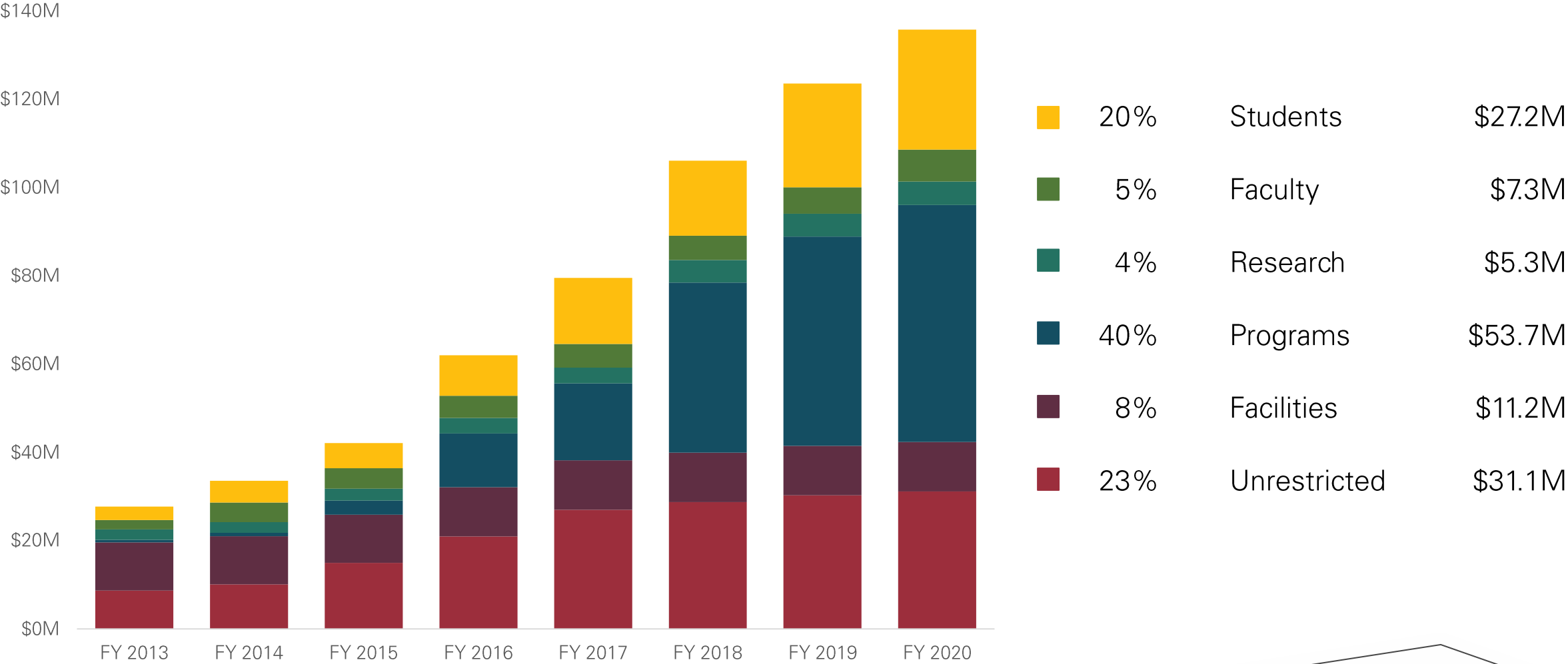


\$135.8M (16%) was secured in planned gift commitments during this campaign

334 commitments were revocable gifts totaling **\$129.9M**

29 commitments were irrevocable gifts totaling **\$5.9M**

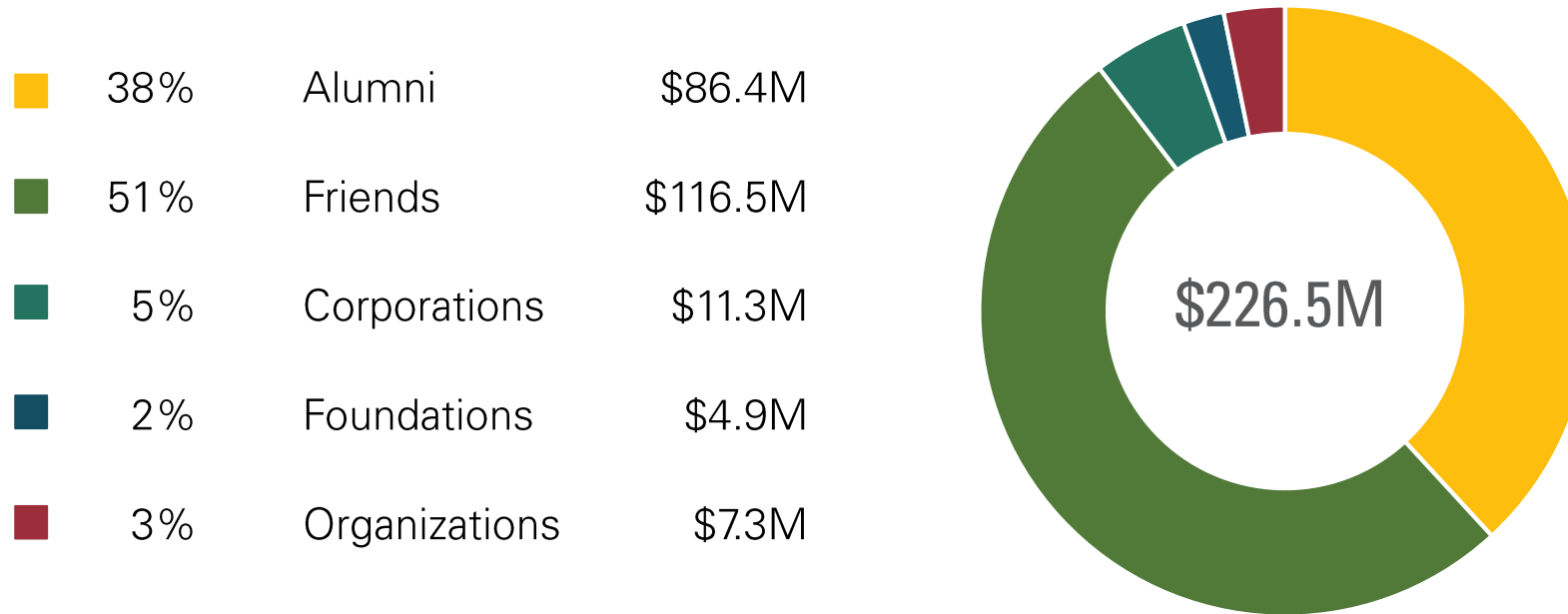
Planned Giving – Impact



Due to rounding, some totals may not correspond with the sum of the separate figures.

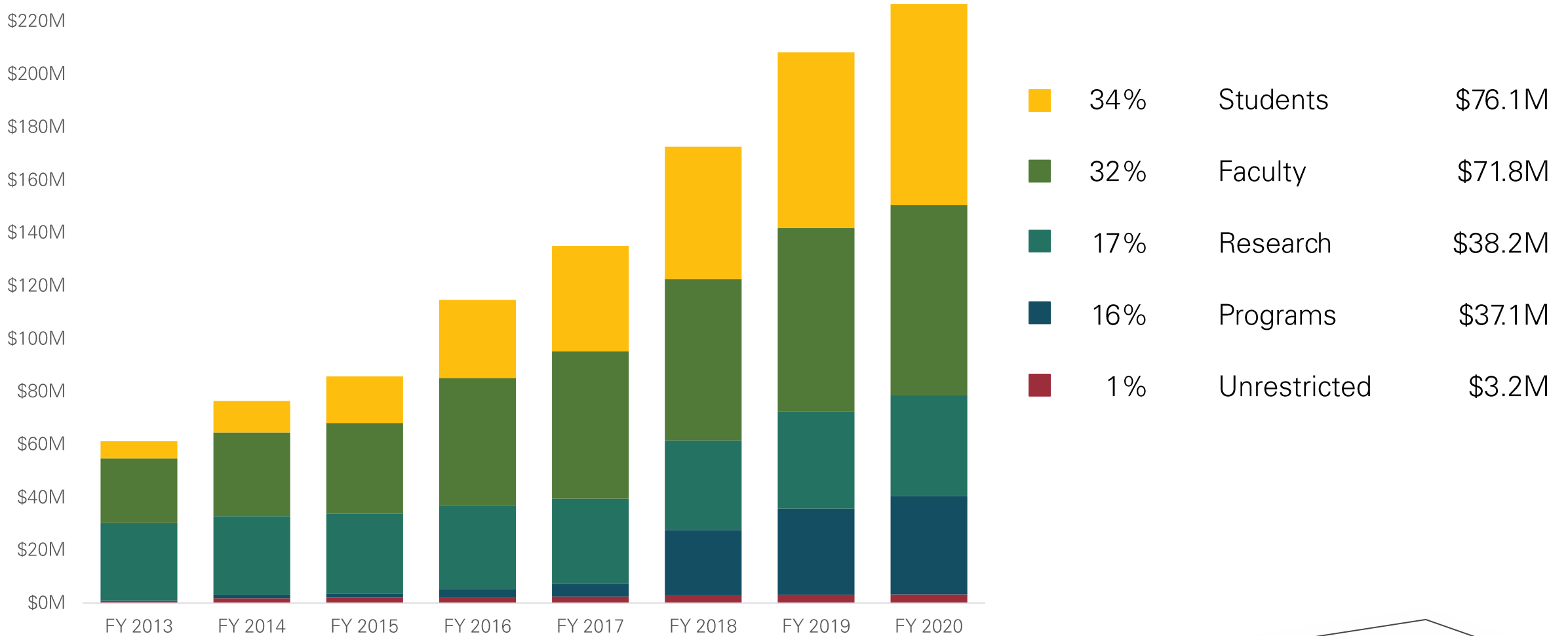
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Endowment – Sources



Due to rounding, some totals may not correspond with the sum of the separate figures.

Endowment – Impact



Due to rounding, some totals may not correspond with the sum of the separate figures.

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Campaign Volunteer Leadership



VCU

Campaign Steering Committee

Lisa (M.D.'01/M) and Zach Ellis

Darlene and George (B.S.'78/B) Emerson

Marsha and Bill (B.S.'69/B; M.S.'74/B) Ginther

Terrell (B.F.A.'87/A) and Elliott Harrigan

Kathleen and John Luke

Kathie and Steve Markel

Nancy (B.S.'80/P) and Ron (B.S.'80/P) McFarlane

Elaine and Baxter (D.D.S.'70/D) Perkinson

Vickie (B.S.'76/B) and Tom (B.S.'76/B; H.L.D.'12) Snead

Jackie Stone and B.K. Fulton

Kathy and Rick Wagoner



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Campaign Cabinet

Arts:	Freddie Jacobs
Athletics:	Natalie Newfield
Business:	Mark Newfield (B.S.'87/B)
Dentistry:	Jerry Kluft (D.D.S.'73/D)
Education:	Brian White
Engineering:	Mary Doswell
Honors College:	Trevor Cox
H&S:	Bill Mattox (B.A.'80/H&S)
ICA:	Abby Moore
Libraries:	Stephanie Holt (B.S.'74/E)
Life Sciences:	Pam Faggert (M.B.A.'86/B)

Massey:	Mike Gracik
MCV Foundation:	Gail Johnson (B.S.'67/N; M.S.'76/N)
Medicine:	Bert Wellons (M.D.'61/M)
Nursing:	Wilsie Bishop (B.S.'70/N; M.S.'78/N)
Pharmacy:	Ron Davis (B.S.'73/P)
Social Work:	Sherry Peterson (M.S.W.'73/SW)
Social Work:	Katie Webb (M.S.W.'73/SW)
VCU Alumni:	Dale Kalkofen (M.A.E.'76/E)
VCU Foundation:	Patty Wilkerson (B.S.'77/MC)
VCU Foundation:	Tracy Kemp Stallings (B.S.'85/N; M.H.A.'95/AHP)



VCU

Make it real.
CAMPAIGN FOR VCU

Campaign Senior Advisory Council

Margaret and Al Broaddus

Lou Harris

Kay and Charles James

Fran and Jim McGlothlin

Ramona and Jim Neifeld (M.D.'72/M)

Susan and Randy Reynolds

Inger Rice

Dawn and Stuart Siegel

Carolyn and John Snow

Lois and Eugene Trani (H.L.D.'09)

Bobbie and Jim Ukrop

Doug Wilder (H.L.D.'93)

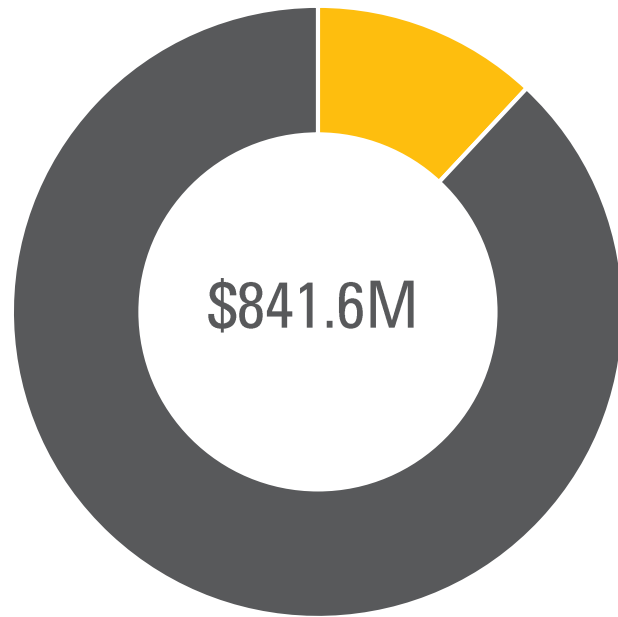
Ken Wright (H.L.D.'11)



VCU

Make it real.
CAMPAIGN FOR VCU

Campaign Volunteer Leadership



Campaign volunteer leaders collectively contributed over **\$100.6M**

This represents **12%** of all campaign giving

■ 12%	Campaign Leadership Giving	\$100.6M
■ 88%	All Other Giving	\$741.1M



Make it real.
CAMPAIGN FOR
VCU



ATTACHMENT J

Virginia Richmond Area Survey



Matt Conrad, JD

Karah Gunther, JD, MHA



PUBLIC OPINION
STRATEGIES
turning questions into answers

FP FREDERICKPolls



Survey of 601 adults in the city of Richmond,
Henrico County, and Chesterfield County,
Virginia, with an oversample of 233 adults in
the city of Richmond, conducted August
25-September 1, 2020.



VCU

Board of Visitors

Participant Demography

- Age: 18-34 (20%); 35-54 (37%); 55+ (44%)
- Race: White (55%); Black (31%); Hispanic (6%); Asian (2%)
- HH \$: <\$20k (7%); \$20-60k (31%); \$60-100k (25%); >\$100k (28%)
- Education: HS or less (15%); some post-secondary (23%); College (41%); Post-grad (20%)

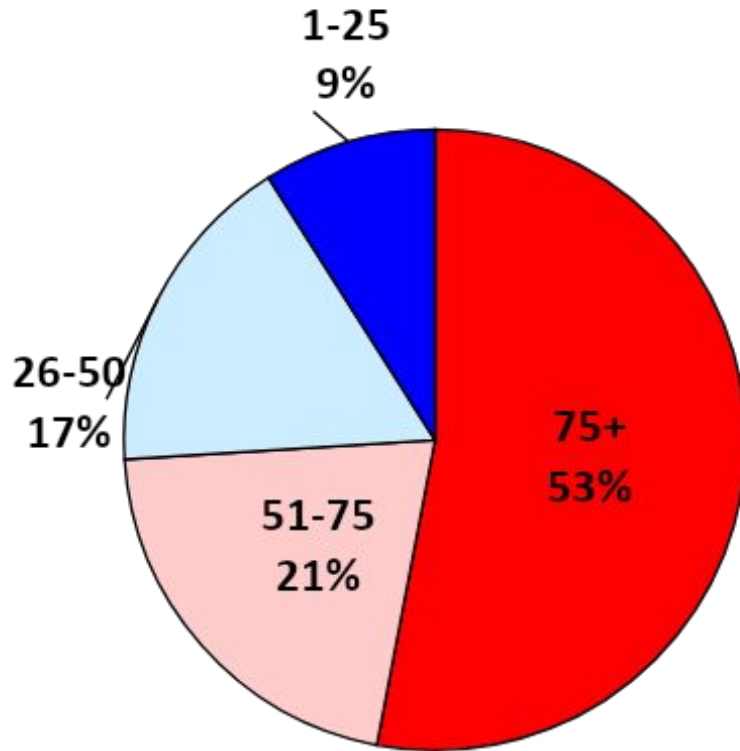
VCU is #1 for having the most significant contribution to the Richmond area economy.

First	Combined	Ranked by % Combined First & Second Choice
31%	51%	<i>Virginia Commonwealth University, also known as VCU</i>
20%	44%	<i>Dominion Energy</i>
21%	37%	<i>The Virginia State Government</i>
14%	29%	<i>Capital One</i>
7%	18%*	<i>Altria Group</i>
...or...		
6%	15%*	<i>Bon Secours Richmond</i>

*Denotes Rounding.

More than half of adults give VCU a strong brand rating.

Ratings



Mean Score

71.6

Improving health care in the Richmond area is the top brand trait of VCU.

38%

Improves health care in the Richmond area

24%

Helps attract talented and diverse people to the Richmond area

14%

Helps the Richmond area economy

11%

Helps low income communities in the Richmond area

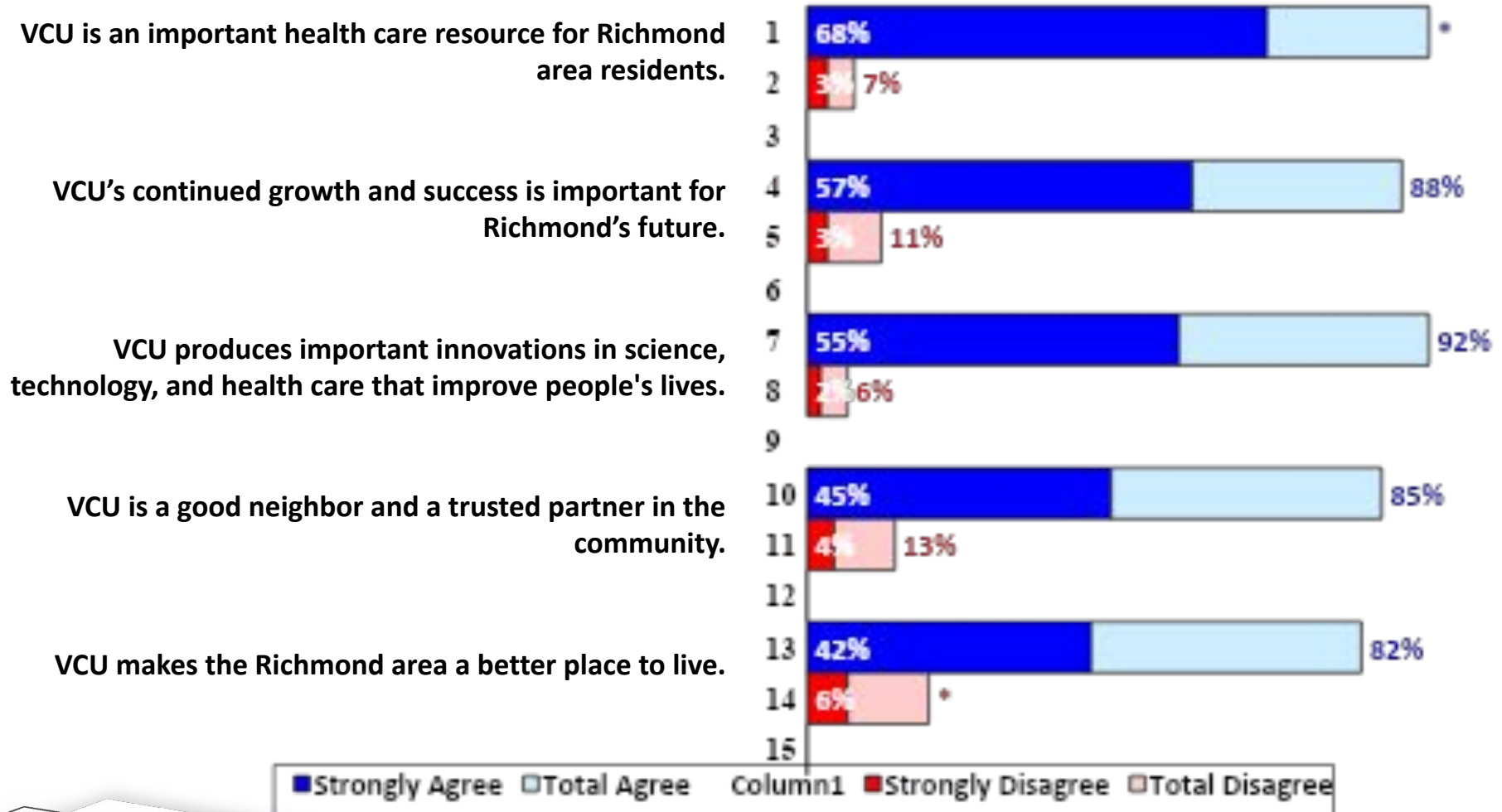
...or...

10%

Promotes creativity and innovation in the Richmond area

Adults agree that VCU is a helpful health care resource, important to Richmond's success, and provides innovation.

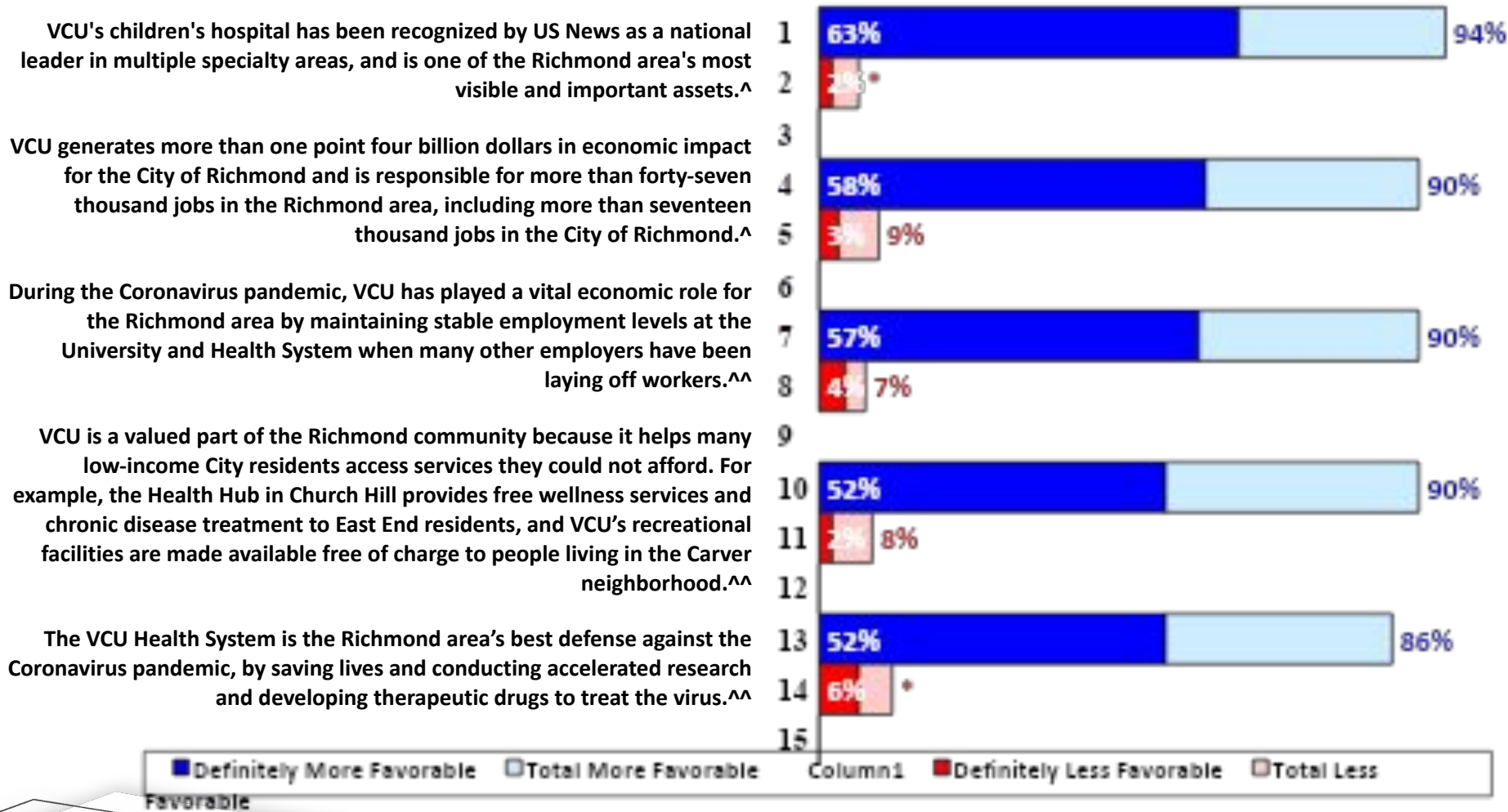
Ranked by % Strongly Agree



**Denotes Rounding.*

Highlighting VCU's children's hospital, the economic impact on the City of Richmond, and the handling of CV are extremely well-received.

Ranked by % Definitely More Favorable



Six-in-ten adults agree that the loss of property tax revenue from VCU is offset by wages and taxes.

63%

Some people say that VCU owns only a small percentage of the tax-exempt property in Richmond, and that the loss of property tax revenue is more than offset by the fact that VCU each year pays more than eight-hundred million dollars in wages and generates more than forty million dollars in state and local taxes.

...while...

35%

Other people say that it hurts the City of Richmond when VCU builds new facilities on valuable pieces of land because that means the city misses out on the property tax revenue, which could be used to fund important services like health care and education.

The property tax message is somewhat problematic, but the positive messages are stronger.

Ranked by % Definitely More Favorable

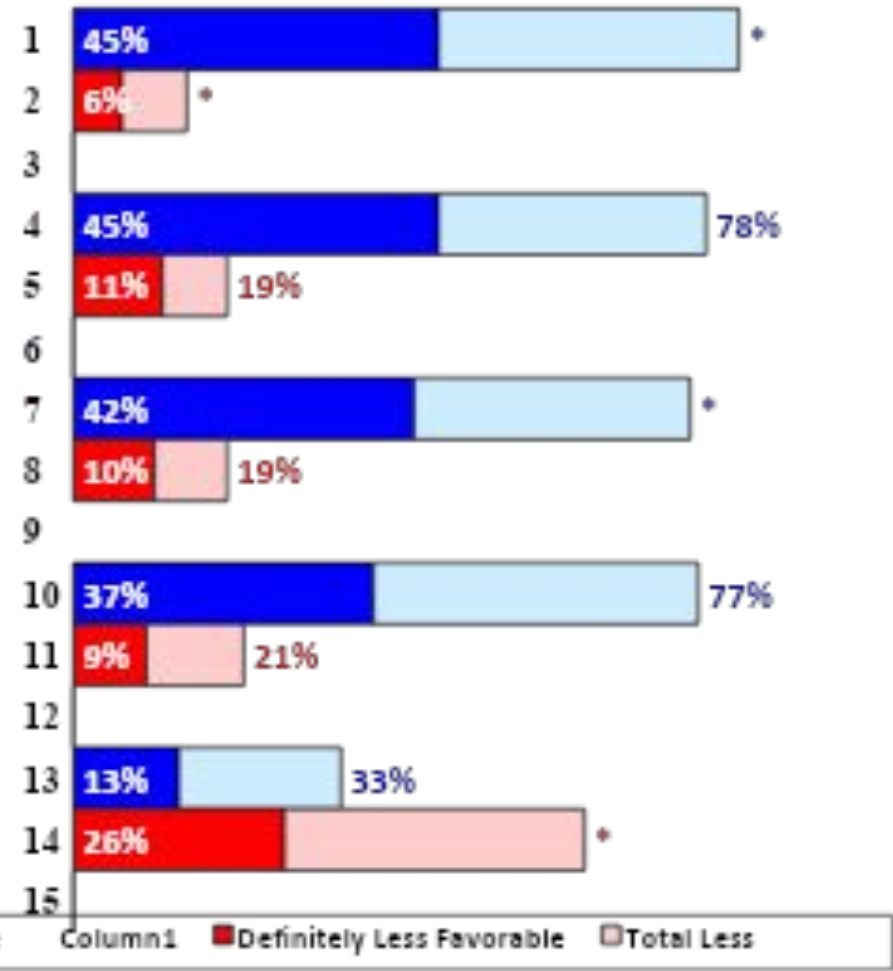
VCU's school of education works with Richmond city schools to improve the performance of both teachers and students.^

By providing financial assistance to first-generation college students, students of color, and students who are economically disadvantaged, VCU is helping to correct years of injustice and inequity in our higher education system and society as a whole.^

The diversity of VCU students and the VCU faculty has made the Richmond area a more welcoming community and reduced divisions driven by income, race, and other factors.^

The new buildings VCU has built have significantly increased property values in the City of Richmond, which in turn has provided more tax revenues for the city to meet pressing needs, like education and health care services.^

As a public university owned by the Commonwealth of Virginia, VCU does not pay property taxes. This means that when VCU builds new university facilities in downtown Richmond, it is actually a negative for Richmond city taxpayers because it takes property off the tax rolls that would otherwise generate property tax revenue for the city.



Favorable

*Denotes Rounding; ^Split Sample A, N=299; ^^Split Sample B, N=302.

Over 60% of adults agree that VCU's construction revitalizes neighborhoods rather than hurting existing ones.

62%

Some people say that VCU's construction of new buildings revitalizes neighborhoods by attracting new business investment, and improves the quality of life for residents by creating safer places and providing better access to quality food and health care.

...while...

36%

Other people say that VCU's construction of new buildings hurts existing neighborhoods, displaces businesses, and makes it harder for lower and middle income families to find affordable housing.

Nearly two-thirds of adults say VCU is making a positive community contribution by living up to their public mission.

65%

Some people say that VCU is living up to this part of their mission. They say that VCU provides free health care and other services for low income members of the community, and that VCU students contribute more than one million hours of service to the community each year.

...while...

33%

Other people say that VCU is NOT living up to this part of their mission. They say that much of the new VCU construction has forced lower and middle income families out of their homes and neighborhoods. This shows that VCU is focused only on growth, and not on improving the lives of those in the Richmond community.

Next Steps

- Opportunities for internal/external messaging
 - Community engagement team
 - VCU News/Media/executive comms
- Driving reputational brand for RVA enrollment
- Targeted messaging based on cross-tabs
- Consider merging of brand to emphasize One VCU
- Community engagement as an expectation for senior leadership across VCU/VCUHS



ATTACHMENT K

onevcu

Public Relations and Marketing Report
University Resources Committee
December 2020 Update

FY 2021 Metrics Dashboard (thru Nov. 2020) - on track

METRIC		FY 20 ACTUAL	FY21 GOAL	FY21 ACTUAL	% GOAL
Earned Media Hits	Top Tier National Hits	243	290	124	43 %
	National Hits	20,000	20,000	7,346	36.7%
	Total Hits	28,900	29,000	11,845	39.6%
Earned Media Impressions (billions)*		42.3B	53B	32.15B	60.6%
Media Coverage Tone (positive/neutral/balanced)		91.5%	92%	92.76%	Exceeding goal
Social Media Engagement (millions)		10.1M	10.6M	7.9M	74.5%
Owned Media-NewsCenter (visits)		991,001	992,000	353,205	30.6%
Paid Advertising Campaign	Out-of-State Conversions**	N/A	7,900	2,666	34%
	Total Conversions	N/A	16,800	7,700	46%

* Hits/impressions do not include Athletics coverage, except where Athletes become news in itself

**Conversions are the number of qualified hits from our advertising website landing page, to a call to action page in the recruitment process. This includes hits to the application page, registering for events or requesting information.

Definitions: Impressions are the number of times content is displayed. Engagement is the number of interactions people have with content (e.g. likes, comments, shares, retweets, etc.). Media hits are content passed by an editorial filter that is published/broadcast in traditional and digital media. Owned media are communications channels under VCU's central control (VCU News Center).

Together@VCU Website/Email/Dashboard Statistics

Website & Email account June 3-Nov. 30, 2020

- Website users: 181,973
- Pageviews: 666,679
- Email account: Resolved 1,261 inquiries
- Open rate for mass mails: ~40%
- 8% of users referred from social media

Dashboard Aug. 20 – Nov. 30

- 316,334 pageviews

oneVCU RESPONSIBLE TOGETHER

Guidelines for a productive return to VCU

Once we return, the campus experience will be different than it was before the COVID-19 crisis. We all – the [university](#), the [students](#) and the [faculty and staff](#) – have a role to play in fostering a safe return. It will be a phased return. Many details have been worked out, and many are still to come. This website will serve as your hub for information and resources.

[Information for students](#) [Information for faculty/staff](#)

What to Expect on VCU's Campus - Fall 2020

Temperature checks are available at 50 kiosks around campus.

Dashboard

(last updated September 3, 2020)

The following metrics are updated daily, Monday through Friday, and are based on the data reported to VCU Student Health Services and Employee Health. VCU provides testing for students experiencing symptoms related to COVID-19. Learn more about [testing](#) and [symptoms](#).

Definitions

Active cases
Active cases are the number of people who have tested positive and are in isolation either on-campus or off-campus. Any reduction in cases indicates individuals being cleared to return to work or class.

Isolation and quarantine
Isolation separates those who test positive from people who are not sick. Quarantine separates and restricts the movement of those who may have been exposed to use if they become sick. Isolation and quarantine information presented below is specific to on-campus residential students. Off-campus students and employees may also be isolated or quarantined. Any reduction in cases indicates individuals being cleared to return to work or class.

Prevalence testing
VCU tests a percentage of asymptomatic community members Monday through Thursday to gauge the proportion of people with COVID-19 in the VCU community.

Entry testing
Residential students were mailed test kits to conduct COVID-19 testing prior to move-in. VCU restricts move-in for students who test positive. Positive entry test results were received prior to the start of classes and are not included in the active case totals.

Active cases	On-campus isolation and quarantine ^a	Prevalence	Entry test results
<ul style="list-style-type: none">• Active student cases of COVID-19: 42• Active employee cases of COVID-19: 9• As reported to Student Health Services and Employee Health.	<ul style="list-style-type: none">• Residential students currently in isolation on-campus: 9• Residential students currently in quarantine on-campus: 38• Total number of residential students: 4,328	<ul style="list-style-type: none">• Prevalence test results returned: 413• Positive tests: 3• Negative tests: 410• VCU percent positivity: 0.7%• Estimated percent positivity seven-day moving average as of Sept. 5: 7.8% (Source: Statista Department of Health)• Results reported as of Sept. 9, 2020. Results will be updated as they become available.	<ul style="list-style-type: none">• Negative entry test results: 4,432• Positive entry test results: 15

Successful Fall Semester

VCU announces exit testing results, prepares to transition to virtual semester finish

By [Mike Porter](#)
University Public Affairs
(804) 828-7037
mporter@vcu.edu

Tuesday, Nov. 24, 2020

Virginia Commonwealth University announced the results of its COVID-19 exit testing as many students prepare to leave the university for Thanksgiving break and to finish the semester virtually.

VCU offered exit tests to all students and 1,260 students signed up for them. The results show 1,258 negative exit tests and two positives.

Fall semester classes end today. Residence halls for first-year students are set to close on Wednesday, Nov. 25 at 10 a.m. While VCU announced that the fall semester would finish virtually after the Thanksgiving break, 81 first-year residential students and 357 upperclassmen who live on campus have asked to return to campus after the Thanksgiving break and will undergo reentry testing.

Facebook: No. 2 organic post for FY and semester
28,786 reach

3,679 engagements

697 reactions (99.5% positive)

Twitter: 4,433 impressions, 229 engagements

LinkedIn: 7,046 impressions, 290 engagements



Return to Campus Coverage

- **124** media hits between June and November
- **787 million** potential impressions
- Major regional and national outlets include the Associated Press, Forbes, Roll Call, Washington Post
- Consistent local coverage in Richmond Times-Dispatch, WTVR CBS 6, WRIC ABC 8, and WWBT NBC 12

Vending machine items include masks, sanitizer at Virginia Commonwealth University

By BRANDON SHILLINGFORD
CAPITAL NEWS SERVICE | SEP 03, 2020 AT 7:39 PM



LATEST EDUCATION

EDUCATION

'Coronavirus Service Proj
Princess Anne High sends
videos to health care wor
worldwide

26m

EDUCATION

Adoptable pets at Virgin
SPCA

2h

VCU students head home for Thanksgiving during the pandemic

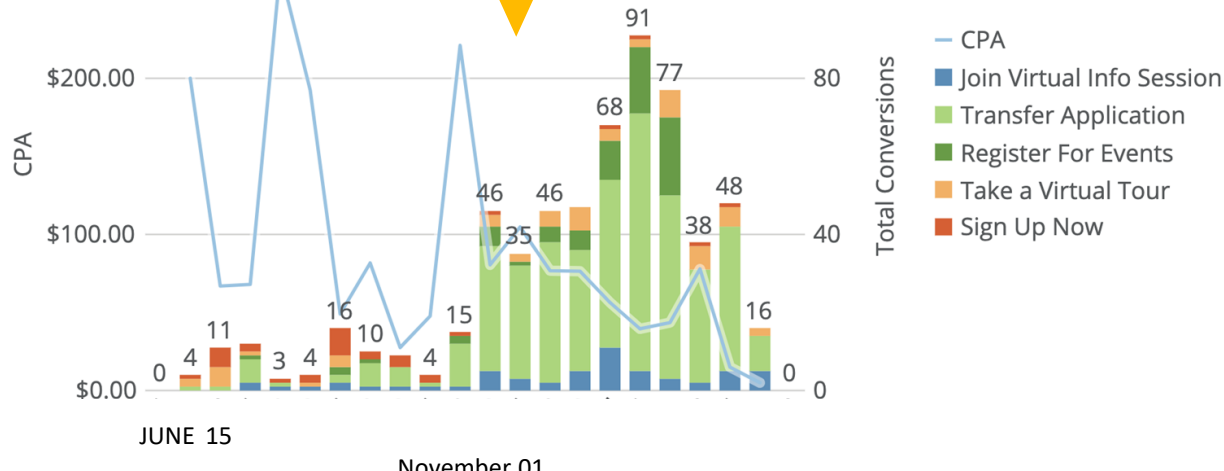


Adult Learner Ad Campaign Metrics (6/14 thru 11/01)

UR Marketing and SEM partnered this summer to develop and launch a recruitment campaign to drive applications from Richmond area adults with some college but no degree.

- The campaign utilized direct mail, digital display, paid search and LinkedIn.
- Campaign started mid-June 2020 and ended late October (search to run through EOY)
- Marketing Goal: drive conversions (clicks to action pages) to application, mailing list or event sign-up pages
- Enrollment Goal: 50 new adult learner students for Spring 2021 semester

Campaign delivered 600 conversions through November 1st (393 hits to Transfer Application page)



FY 21 Undergrad Recruitment and Awareness Ad Campaign

Phase One and Two complete: (9/7/20 - 11/30/20). Phase Three underway.

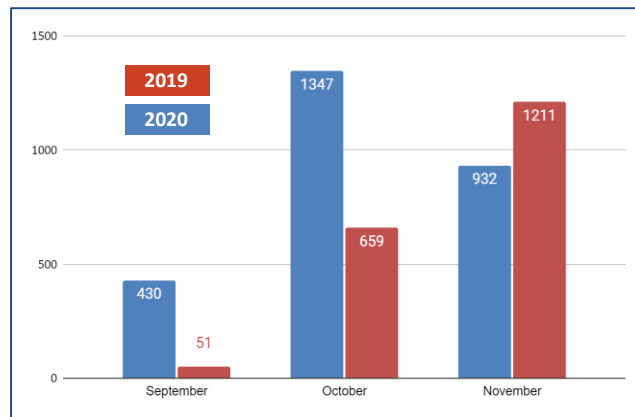
- PHASE ONE: Drive conversions to Virtual Info Session sign up page
- PHASE TWO: Drive conversions to Application page



Freshman Application Conversions are up 37% over 2019 year-to-date

- YTD Total conversions: 9,113
- Out-of-state total conversions: 3,110
- October Freshman App conversions up 104% in October, but down 23% in November YoY
 - Possible correlation to scholarship deadline shifting up two weeks to 11/1 in 2020 (vs. 11/15 in 2019)
 - Rise in COVID cases in early November along with Thanksgiving holiday

Transfer Application conversions are up 74% YoY (4,706 in 2020 vs. 2,693 in 2019)



CONVERSIONS ARE DEFINED AS CLICKS TO:

- Freshman Application Page
- International Freshman Application Page
- Join Our List Undergrad Page
- Join Virtual Info Session Page
- Register For Events Page
- Transfer Application Page
- Take a Virtual Tour Page

FY 21 Undergrad Recruitment and Awareness Ad Campaign

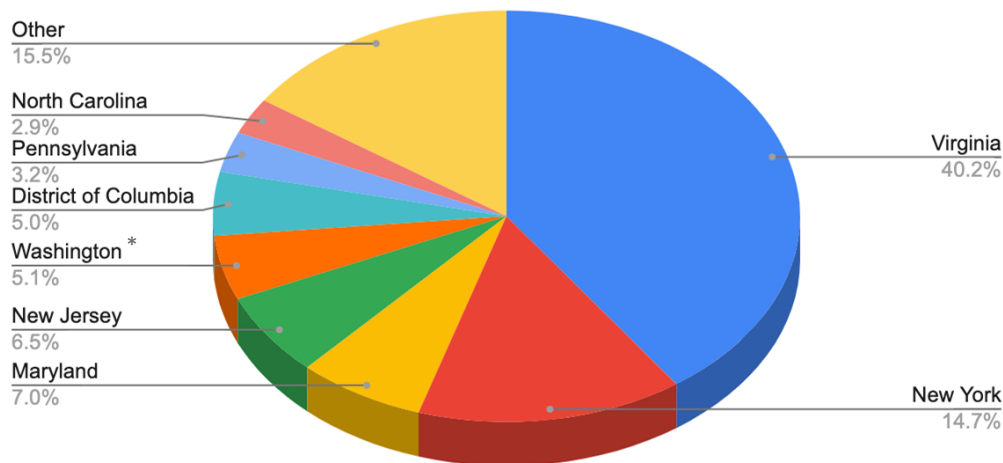
Paid Search: (Sept - Nov)

- Click thru rate up 77% YOY
- Total conversions up 86% YOY, Freshman application conversions up 84% year-over-year

Google Analytics: (VCU web traffic related to ad campaign)

- 60% of campaign landing page traffic originated out of Virginia
- District of Columbia, Maryland, North Carolina and New York were top states to hit vcu.edu YTD

Campaign Landing Page traffic YTD



* Washington state traffic has been identified as bot traffic and will be filtered out moving forward

vcu.edu Homepage traffic YTD:

Region	Sessions
Virginia	5,359,900
District of Columbia	191,600
Maryland	129,800
North Carolina	92,400
New York	84,700
Pennsylvania	51,000
California	50,600
New Jersey	45,000

Creative: Print, Digital Video & RVA Airport



Digital Video Ads (click to play)



The Chronicle print ad (diversity issue)

Richmond Airport Spectacular Mural Ad



ATTACHMENT L

RESOLUTION OF THE BOARD OF VISITORS OF VIRGINIA COMMONWEALTH UNIVERSITY AUTHORIZING THE RESTRUCTURING OF INDEBTEDNESS WITH THE VIRGINIA COLLEGE BUILDING AUTHORITY

WHEREAS, VIRGINIA COMMONWEALTH UNIVERSITY, in furtherance of its educational purposes, has borrowed funds from the Virginia College Building Authority (the “Authority”) through the Authority’s Public Higher Education Financing Program,

WHEREAS, the Governor of the Commonwealth of Virginia (the “Commonwealth”) has recognized that the COVID-19 pandemic has had, and continues to have, a tremendous adverse impact on higher education, including the fiscal health of the Commonwealth’s colleges and universities, and in response to financial conditions created by the pandemic, the Governor has proposed a debt restructuring plan for debt-funded capital projects of higher educational institutions which will defer debt service payments on certain indebtedness obtained through or with the assistance of the Commonwealth, including debt obtained through the Authority (the “Debt Restructuring Program”);

WHEREAS, the Board of Visitors (the “Board”) of the **VIRGINIA COMMONWEALTH UNIVERSITY** (the “Institution”) desires to participate in the Debt Restructuring Program to restructure all or a portion of its indebtedness to the Authority (the “Authority Debt”) and desires to delegate to certain officers of the Institution the authority (i) to select the Authority Debt to be restructured and to establish and agree to the terms of such restructuring, (ii) to approve the forms of, and execute and deliver, any and all, documents, instruments and agreements required by the Authority in connection therewith, including any modifications or amendments of loan or other documentation evidencing the Authority Debt (the “Restructuring Documents”), and (iii) to take any and all other action required to effect and implement such debt restructuring, including any post-issuance or post-closing monitoring or compliance requirements.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD:

Section 1. The Institution is authorized to participate in the Debt Restructuring Program and, accordingly, (1) the Senior Vice President of Finance and Budget and Chief Financial Officer and (2) the Treasurer (the “Authorized Officers”) are each hereby delegated and invested with full power and authority, subject to the provisions of Section 2 hereof, (i) to select the Authority Debt to be restructured and to establish and agree to the terms of such restructuring, including extending the term of payment and the modification of other terms thereof, (ii) to pledge as required by the Authority the general revenues of the Institution as security to the extent not prohibited by law or otherwise restricted, (iii) to approve the forms of the Restructuring Documents required by the Authority and any subsequent amendments thereto, (iv) to execute and, deliver, on behalf of the Institution such Restructuring Documents, with approval of the terms thereof being evidenced conclusively by the execution and delivery thereof, and (v) to do and perform such other acts, and execute and deliver such other documents and agreements as may be necessary or appropriate to carry out the intent of this Resolution.

Section 2. In connection with the authorization herein provided the Authorized Officers may, in connection with any debt restructuring obligation, provide for (i) the funding of reserves if required, and (ii) the funding of issuance costs and other financing expenses related to such restructuring; provided (a) the principal amount of any such obligation shall not exceed the amount required to cover the principal of and interest on the indebtedness to be restructured plus amounts permitted by clauses (i) and (ii) above, (b) the interest rate on any such obligation shall be as determined by the Authority, and (c) the restructuring terms, including the rate of interest on any such obligation or method of determining such rate, shall be approved by the Treasury Board of the Commonwealth.

Section 3. If it is determined by the Authority in connection with any Authority Debt restructuring that the Institution is subject to continuing disclosure obligations under Rule 15c2-12 of the federal Securities and Exchange Commission an Authorized Officer is hereby authorized and directed to, enter into a continuing disclosure undertaking in form and substance reasonably satisfactory to the Authority, and the Institution will comply with the provisions and disclosure obligations contained therein.

Section 4. The Board designates the Treasurer to be responsible for implementing procedures to monitor post-issuance compliance with covenants in any Restructuring Document and any amendments thereto, if required in connection with federal tax law or federal securities law requirements.

Section 5. This resolution shall take effect immediately upon its adoption.

Adopted: _____, 20____

_____, Secretary
**BOARD OF VISITORS OF
VIRGINIA COMMONWEALTH UNIVERSITY**

ATTACHMENT M

VIRGINIA COMMONWEALTH UNIVERSITY RESOLUTION REGARDING CRISIS AND EMERGENCY PREPAREDNESS PLAN ADOPTION

WHEREAS, the Board of Visitors of Virginia Commonwealth University is concerned with the health and well-being of its students, faculty and staff, and desires that the best possible emergency services be available to them; and, the President of the University similarly is concerned with the health and well-being of its students, faculty and staff, and desires that the best possible emergency services be available to them; and

WHEREAS, the Code of Virginia, Chapter 8 of Title 23.1, Section 23.1-804, provides that the governing board of each public institution of higher education in Virginia shall develop, adopt, and keep current a written crisis and emergency management plan; that every four years, each public institution of higher education shall conduct a comprehensive review and revision of its crisis and emergency management plan to ensure that the plan remains current, and the revised plan shall be adopted formally by the governing board and that such review shall also be certified in writing to the Virginia Department of Emergency Management; and

WHEREAS, such a plan has been developed by Virginia Commonwealth University staff, in coordination with the Virginia Department of Emergency Management, and with input from, Virginia Commonwealth University Incident Coordination Team Departments and the City of Richmond Office of Emergency Management;

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF VISITORS OF VIRGINIA COMMONWEALTH UNIVERSITY

Section 1. The Board hereby officially adopts the Virginia Commonwealth University Crisis and Emergency Preparedness Plan, to include plans and procedures for both natural and man-made disasters.

Section 2. This resolution shall take effect immediately upon its adoption.

Board of Visitors

Finance, Budget & Investment Committee

December 11, 2020



VCU

ATTACHMENT N

Open Session Action Items

- Resolution Authorizing the Restructuring of Indebtness with the Virginia College Building Authority

Summary of Refinancing Actions

ISSUER	VCU	The Commonwealth of Virginia	
DATE	6/18/2020	11/5/2020	TBD
REFUNDING	9d Bonds	9c Bonds	VCBA 9d Bonds
AMOUNT	\$71.3M	\$20.4M	\$35.2M
UNIT	School of the Arts School of Business Athletics Housing Parking VCU Real Estate Fdn. University Reserves	Housing	College of Health Professions School of Medicine Biotech Massey Cancer Center Housing Parking Student Recreation Life Sciences (Rice River Center)
SAVINGS	\$3.1M NPV	\$4.1M NPV	\$NPV to be determined

Open Session Action Items

- Resolution Approving the Comprehensive Emergency Management Plan

Crisis and Emergency Management Plan (CEMP)

Background

- VCU's CEMP identifies potential threats, an incident command structure, phases of emergency, impacts on operations and operational contingency plans.
- Every year, VCU conducts a comprehensive review and revision of the CEMP to ensure that the plan remains current.
- Every four years, the revised plan must be adopted formally by the Board of Visitors.

Considerations

- This plan is required per the Commonwealth of Virginia code §23.1-804. Significant changes made to the CEMP plan since 2016 are outlined.

Recommendation

Approve the 2020 VCU Crisis and Emergency Management Plan.

Report from Senior Vice President and CFO

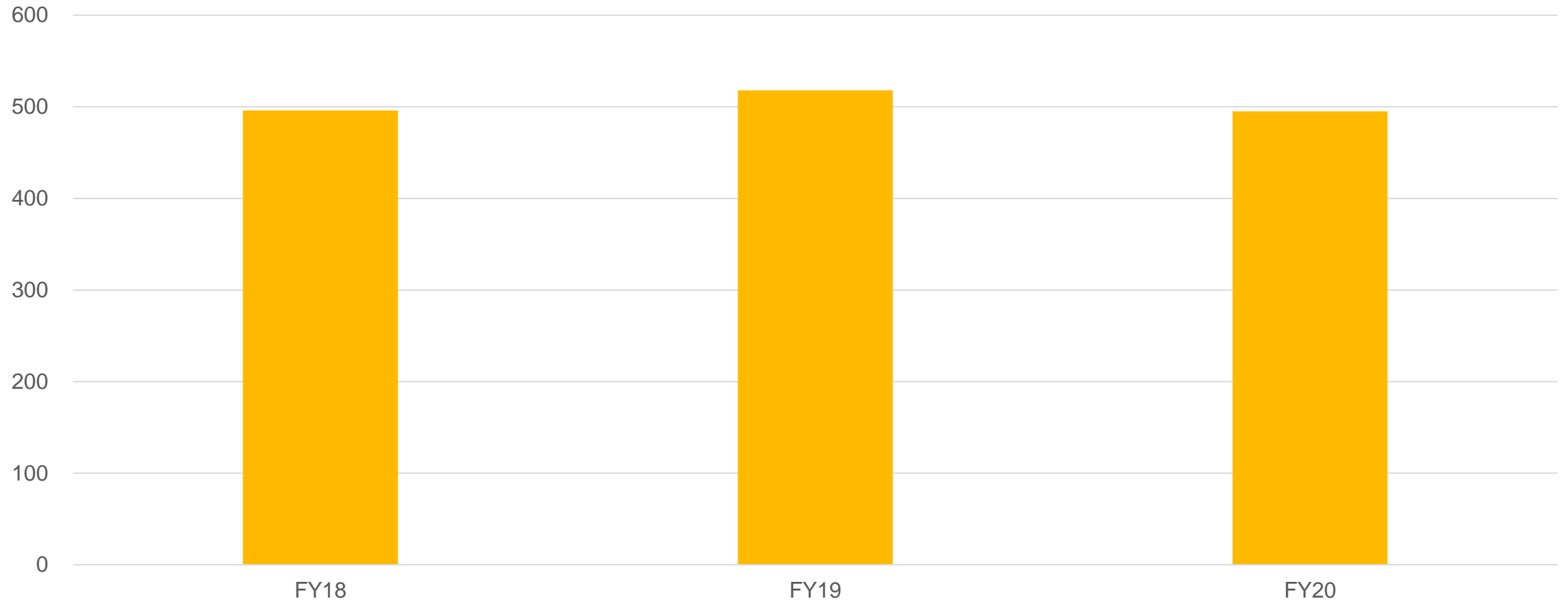
- Update on State Bonds
- University's Cash Position
- Related Entity Financial Statements
- Budget Update
- Treasurer's Report

Summary of Refinancing Actions

ISSUER	VCU	The Commonwealth of Virginia	
DATE	6/18/2020	11/5/2020	TBD
REFUNDING	9d Bonds	9c Bonds	VCBA 9d Bonds
AMOUNT	\$71.3M	\$20.4M	\$35.2M
UNIT	School of the Arts School of Business Athletics Housing Parking VCU Real Estate Fdn. University Reserves	Housing	College of Health Professions School of Medicine Biotech Massey Cancer Center Housing Parking Student Recreation Life Sciences (Rice River Center)
SAVINGS	\$3.1M NPV	\$4.1M NPV	\$NPV to be determined

VCU Cash and Investments – Three Year Trend

(in Millions)



FY 20 VCU Related Entities Financial Statements

Karol Kain Gray, SVP and CFO

December 11, 2020



VCU

Financial Statement Summary

VCU Related Entities
as of June 30, 2020
(in Millions)

	MCV Foundation	VCU Foundation	VCU Real Estate Foundation	VCU School of Business Foundation	VCU College of Engineering Foundation	Dentistry @ VCU	Total
Assets:							
Cash	\$ 31.4	\$ 24.1	\$ 6.5	\$ 8.9	\$ 4.5	\$ 6.6	\$ 82.0
Investments & Endowments	581.3	85.3	0.0	46.6	70.6	9.8	793.6
PPE	2.0	0.0	76.9	23.5	36.9	0.0	139.3
Receivables and Other	31.2	7.8	8.3	5.9	1.0	2.8	57.0
Total Assets	645.9	117.2	91.7	84.9	113.0	19.2	1,071.9
Liabilities	10.3	36.9	50.6	38.4	60.8	9.5	206.5
Net Position	635.6	80.3	41.1	46.5	52.2	9.7	865.4
Total Liabilities and Net Position	\$ 645.9	\$ 117.2	\$ 91.7	\$ 84.9	\$ 113.0	\$ 19.2	\$ 1,071.9
Beginning Net Position	611.8	81.1	38.5	46.3	51.9	9.2	838.8
Revenues	55.3	11.2	9.1	7.0	9.4	16.0	108.0
Expenses	31.5	12.0	6.5	6.8	9.1	15.5	81.4
Change in Net Position	\$ 23.8	\$ (0.8)	\$ 2.6	\$ 0.2	\$ 0.3	\$ 0.5	\$ 26.6

General Comments

- All foundations received unmodified opinions
- No material adjustments to financial statements
- No management letter comments

Board of Visitors

Budget Update

December 11, 2020



VCU

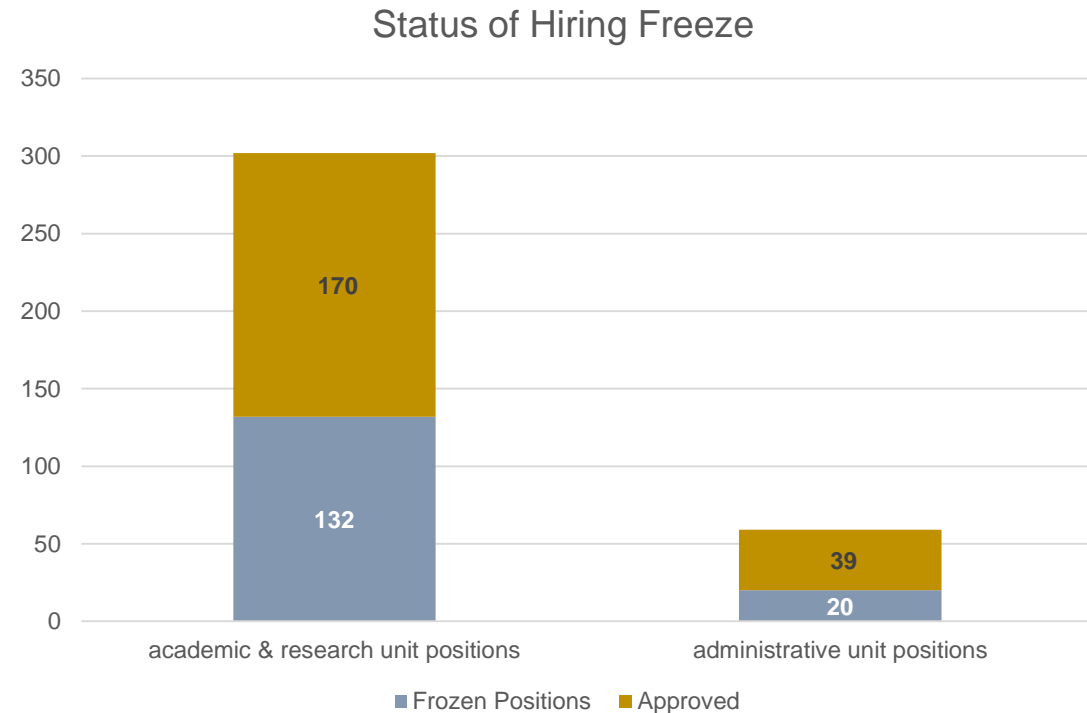
Cost Savings

Even prior to the pandemic, the university had taken action to reduce costs and enable unit savings:

- Savings and efficiencies from the new procure-to-pay system
 - The 5-year investment cost of \$3.2M, which included licensing and implementation, was paid back in the first 6.3 months of operation.
 - Over the next 5 years, additional hard cost savings of \$16.8M are expected through improved sourcing and contracting, as well as, early payment discounts and electronic payments.
- Bond refinancing savings of \$10.8M in 2021 and \$37M in the first 5 years
- Spending freeze continued (impact in FY2021 for travel = \$5.4M)

Hiring Freeze

- Hiring freeze started March 31st, 2020, is forecast to save a minimum of \$5M through December and will contribute to overall unit reduction plans to meet current 4% targets.



FY2021 E&G Financial Plan

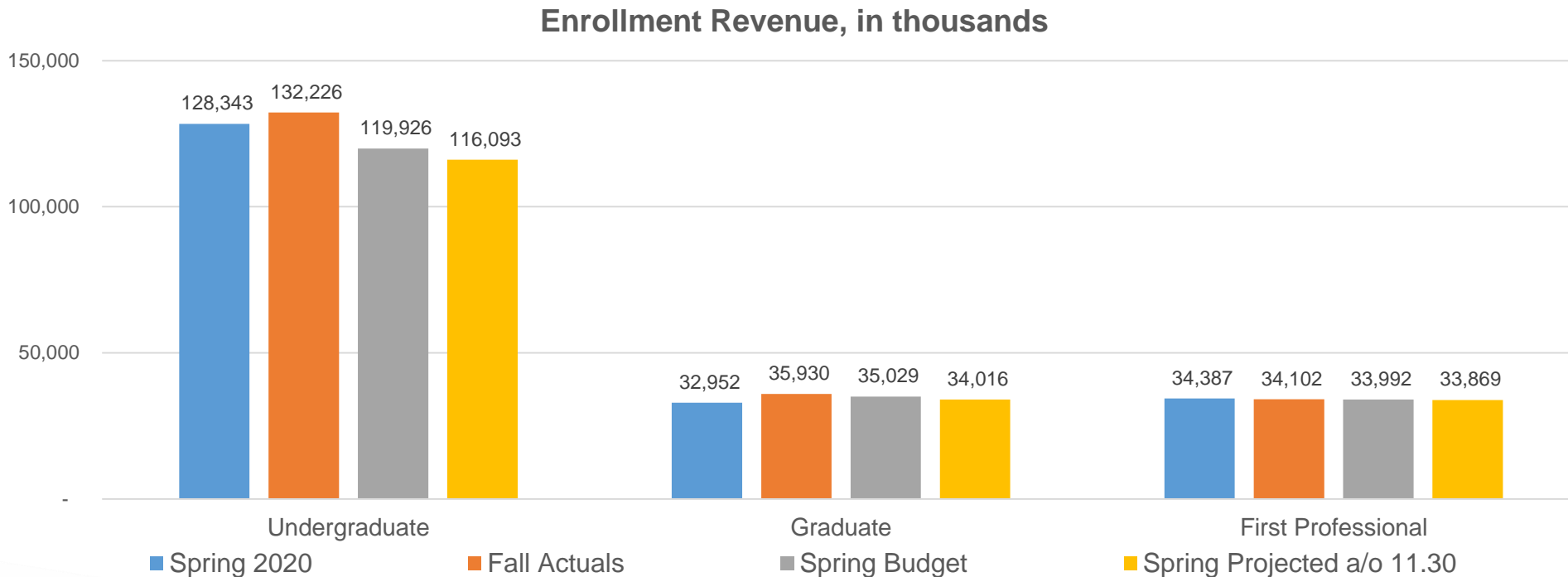
	2021 Adopted	2021 Fall
<u>University Tuition Revenue</u>		
Adopted 10% Decline Vs. Fall 3% Decline	(41,546)	(9,234)
Total University Revenue	(41,546)	(9,234)
<u>Projected Expenses</u>		
Adopted New Needs	(14,296)	(14,296)
Projected Total University Expenses	(14,296)	(14,296)
Total University Shortfall	(55,842)	(23,530)
<u>Actions Required To Balance 2021</u>		
CARES Funding (Retained by Auxiliaries)	10,177	-
Strategic School and Admin Reductions (8.7% to 4%)	29,234	17,204
One Time Use of Contingency Funds	16,431	6,326
Total 2021 Actions	55,842	23,530
University Net Position	-	-
<u>State and Federal Funding Update</u>		
Student Scholarship CARES and GEERF	\$10M	\$12.4M
COVID PPE Reimbursement and CARES Aux	\$10M	\$24.5M
New State Funding	\$25M Proposed	\$10M Final

FY2021 Auxiliary Impact

	FY2019 Year-End Actual	FY2020 Year-End Actual	Current FY21 Projection	Projection vs FY19 Actual		Projection vs FY20 Actual	
Housing Revenue	32,490,336	24,969,140	19,509,453	(12,980,883)	-40.0%	(5,459,687)	-21.9%
Dining Revenue	27,285,865	21,507,248	15,877,252	(11,408,613)	-41.8%	(5,629,996)	-26.2%
Parking Revenue	19,709,623	17,474,966	11,660,934	(8,048,689)	-40.8%	(5,814,032)	-33.3%
Total	79,485,824	63,951,353	47,047,639	(32,438,186)	-41%	(16,903,714)	-26%

Spring 2021 Preliminary Discussion

	Spring 2020	Spring Budget	Spring Projected a/o 11.30	Variance to Budget	
Undergraduate	128,342,987	119,926,310	116,092,979	(3,833,331)	-3.2%
Graduate	32,952,293	35,028,518	34,016,427	(1,012,091)	-2.9%
First Professional	34,386,815	33,991,828	33,868,695	(123,133)	-0.4%
Total	195,682,095	188,946,657	183,978,101	(4,968,556)	-2.6%



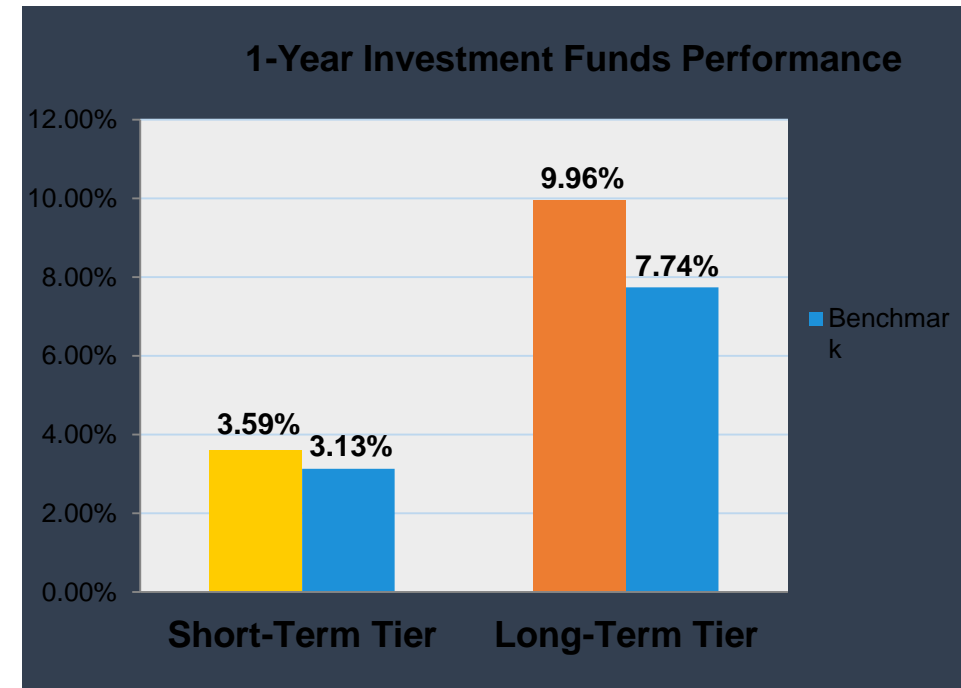
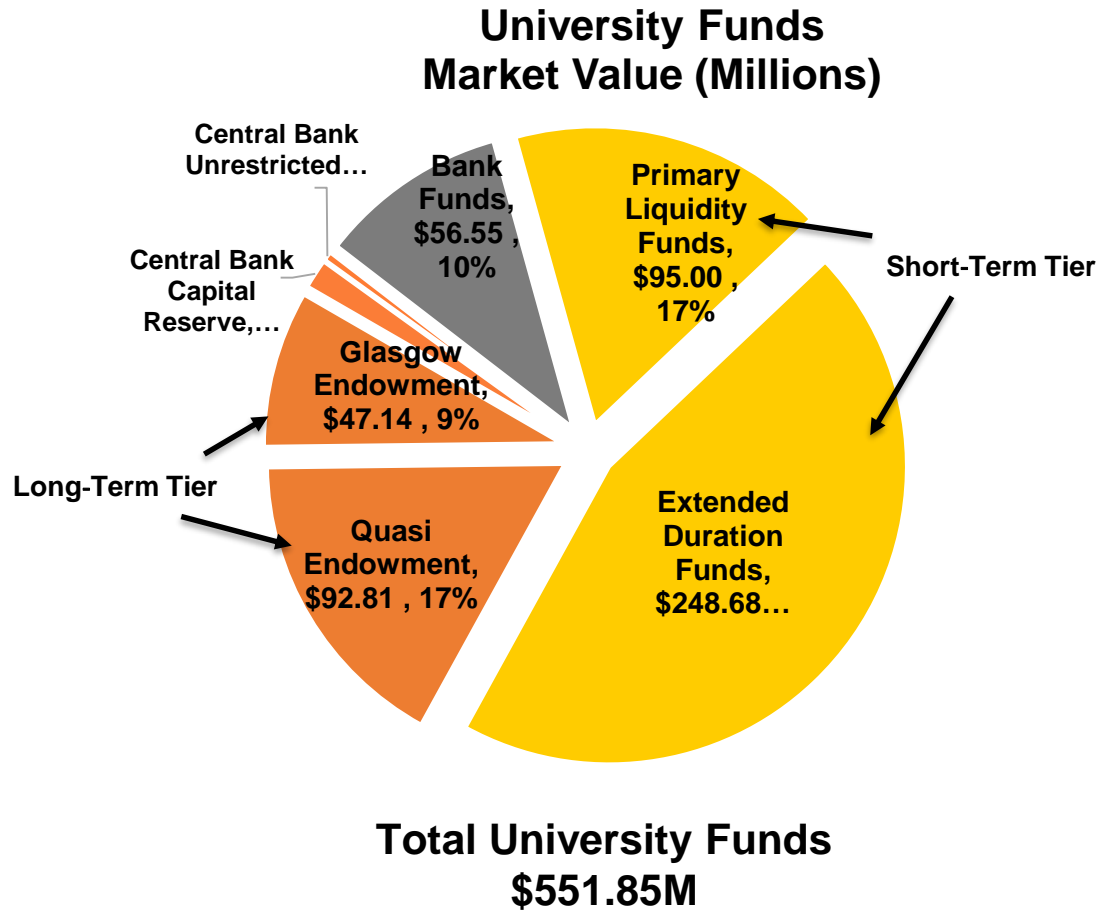
Questions?

Treasurer's Report as of September 30, 2020



VCU

Total University Funds Overview for the Period Ending September 30, 2020



Short-Term and Long-Term Tier Performance and Asset Allocation as of September

Short-Term Tier	Market Value	Current Allocation		QTD	1 Year	Annualized		
						3 Years	5 Years	Since 7/2009
Primary Liquidity Funds / Payden & Rygel	\$95,003,048	27.6%	Total Return	0.06%	1.35%	1.76%	1.30%	0.66%
<i>iMoneyNet MM All Taxable</i>				0.01%	0.72%	1.35%	0.91%	0.41%
			Price Return	-0.03%	0.06%	0.01%	-0.03%	-0.14%
			Income Return	0.09%	1.29%	1.75%	1.33%	0.80%
Extended Duration Funds / Merganser	\$248,684,084	72.4%	Total Return	0.39%	3.98%	3.02%	2.25%	1.86%
<i>BofA ML US Corp & Govt 1-3 Year Blended¹</i>				0.27%	3.74%	2.87%	2.11%	4.15%
			Price Return	-0.15%	1.54%	0.68%	0.12%	-0.29%
			Income Return	0.54%	2.44%	2.34%	2.13%	2.15%
Total Operating Funds	\$343,687,131	100.0%	Total Return	0.38%	3.59%	2.84%	2.04%	1.48%
<i>Short-Term Tier Composite²</i>				0.27%	3.13%	2.59%	1.80%	1.70%
			Price Return	-0.20%	1.18%	0.58%	0.15%	-0.21%
			Income Return	0.58%	2.41%	2.26%	1.89%	1.69%

Long-Term Tier	Market Value	Current Allocation	VCU Strategic Allocation	QTD	1 Year	Annualized		
						3 Years	5 Years	Since 4/2012
Equity	94,571,209	67.5%	65%	8.35%	13.00%	5.86%	7.90%	7.08%
<i>MSCI All Country World</i>				8.13%	10.44%	7.12%	10.37%	9.11%
VCIMCO Equity	94,376,491	67.4%						
JP Morgan Equity	194,718	0.1%						
Real Assets	6,013,634	4.3%	10%	-2.71%	-17.62%	-4.50%	-0.42%	0.51%
<i>MSCI All Country World Real Estate</i>				2.00%	-11.16%	0.77%	3.93%	5.03%
VCIMCO Real Assets	5,275,081	3.8%						
JP Morgan Real Assets	738,553	0.5%						
Fixed Income and Cash	39,506,112	28.2%	25%	2.68%	1.34%	0.78%	0.51%	0.61%
<i>Bloomberg Barclays US Aggregate</i>				0.61%	6.98%	5.24%	4.18%	3.39%
VCIMCO Fixed Income and Cash	39,318,703	28.1%						
JP Morgan Fixed Income and Cash	187,409	0.1%						
Total Investments	140,090,954	100.0%	100%	6.13%	9.96%	4.96%	5.83%	5.06%
<i>VCIMCO Long-Term Benchmark</i>				5.65%	7.74%	6.32%	7.50%	5.45%
VCIMCO Total	138,970,274							
JP Morgan Total	1,120,680							
VCIMCO Funds Net Liabilities	(138,594)							
Long-Term Tier Net Asset Value	139,952,360							
Total Long-Term and Short-Term Tiers	\$483,639,492							

Note: The table above includes assets still held in custody by JPMorgan, some of which will be transferred into The Ram Fund upon liquidation. These assets are not managed by VCIMCO but are included above at the request of VCU and for completeness of the Long-Term Tier.

Central Bank Performance and Asset Allocation as of September 30, 2020

Asset Class	Market Value	%	3Q 2020	Since Inception
Capital Reserve (VCIMCO)				
Equity	\$5,884,092	50.4%	9.21%	11.51%
<i>MSCI All Country World</i>			8.13%	8.59%
Real Assets	\$330,121	2.8%	-3.61%	-21.15%
<i>MSCI All Country World Real Estate</i>			2.00%	-7.60%
Fixed Income and Cash	\$2,703,555	23.1%	2.69%	1.91%
<i>Barclays US Aggregate</i>			0.61%	7.81%
Capital Reserve (VCIMCO)	\$8,917,769	76.4%	6.64%	8.99%
<i>Composite Benchmark*</i>			5.65%	7.14%
Unrestricted Reserve (Payden & Rygel)	\$2,761,284	23.6%	0.00%	0.88%
<i>iMoneyNet MM All Taxable</i>			0.01%	0.87%
Grand Total	\$11,679,053	100.0%	4.99%	6.86%
Net Liabilities - VCIMCO Funds	(\$9,546)			
Central Bank (Net)	\$11,669,507			

* Composite Benchmark comprises 65% MSCI All Country World, 25% Barclays US Aggregate, 10% MSCI All Country World Real Estate.

Monitoring Report
As of December 4, 2020

Cash and Investments

	Quarter Ended 9/30/2020	(in millions) As of 11/30/2020	As of 12/4/2020
Bank Funds			
Total Bank Funds ^A	\$ 56.55	\$ 99.57	\$ 138.11
Short-Term Tier			
Primary Liquidity Fund (Payden & Rygel)	\$ 95.00	\$ 45.00	\$ 25.00
Extended Duration Fund (Merganser)	248.68	248.24	248.16
Central Bank Unrestricted Fund (Payden & Rygel)	2.76	2.76	2.76
Total Short-Term Tier (VCIMCO)	\$ 346.44	\$ 296.00	\$ 275.92
Long-Term Tier ^B			
Central Bank VCU#2 Account (VCIMCO)	\$ 92.81	\$ 100.40	\$ 100.40
	8.91	9.60	9.60
Total Long-Term Tier (VCIMCO)	\$ 101.72	\$ 110.00	\$ 110.00
Glasgow Endowment			
Total Glasgow Endowment (VCIMCO)	\$ 47.14	\$ 50.80	\$ 50.80
Total University Funds:	\$ 551.85	\$ 556.37	\$ 574.83
Comparative Federal Interest Rate:	Quarter Ended 9/30/2020	As of 11/30/2020	As of 12/4/2020
1-year	0.12	0.11	0.11
10-year	0.69	0.84	0.97

^A Includes Qatar's balance of \$13.31 million for October 2020

^B The Long-Term Tier values are estimated as of November 2020

Debt

	Latest Debt Report as of 6/30/2019	As of 6/30/2020	As of 12/4/2020
VCU Outstanding Debt:			
Outstanding Bonds	\$ 440,127,716	\$ 436,113,171	\$ 425,238,171
VCBA 9d	178,699,999	96,210,000	87,505,000
VCBA 9d balances covered by Financing Agreements	6,120,000	5,265,000	4,365,000
VCU 9c	52,432,814	50,040,137	50,950,137
VCU 9d	116,285,000	201,220,000	201,220,000
VCU 9d balances covered by Financing Agreements	86,589,903	83,378,034	81,198,034
Capital Leases and Installment Obligations	4,188,959	3,696,087	3,696,087
	\$ 444,316,675	\$ 439,809,258	\$ 428,934,258

Debt Ratio:

Audited Debt Ratio (as of 6/30/2019)	3.82%		
Estimated Unaudited Debt Ratio (as of 6/30/2020)		4.03%	n/a

	(in millions) Quarter Ended 9/30/2020	As of 12/4/2020
VCU Commercial Paper (JP Morgan):		
Commercial Paper Outstanding Balance:	\$4.78	\$4.78
Available Balance:	<u>\$70.22</u>	<u>\$70.22</u>
	<u>\$75.00</u>	<u>\$75.00</u>

Report from Vice President for Administration

2021 Return to Campus Plan



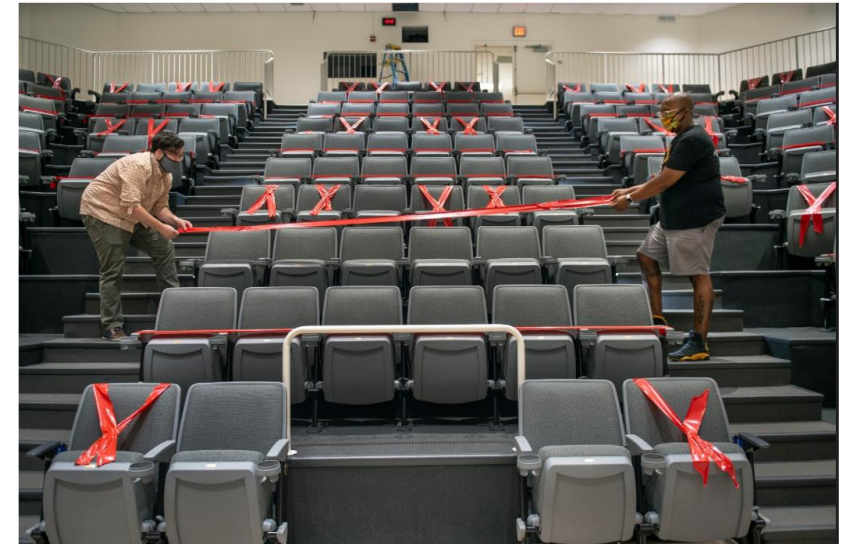
onevcu | RESPONSIBLE
TOGETHER

December 11, 2020

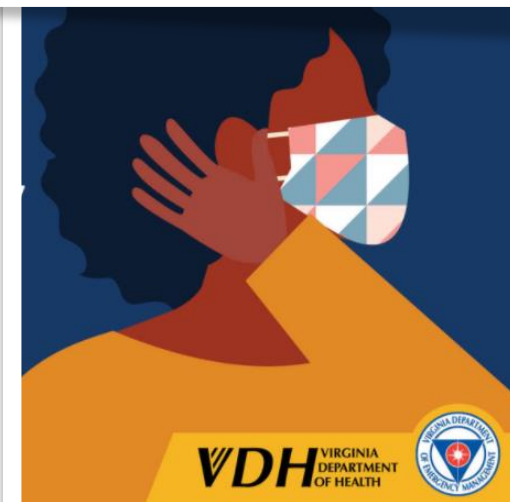
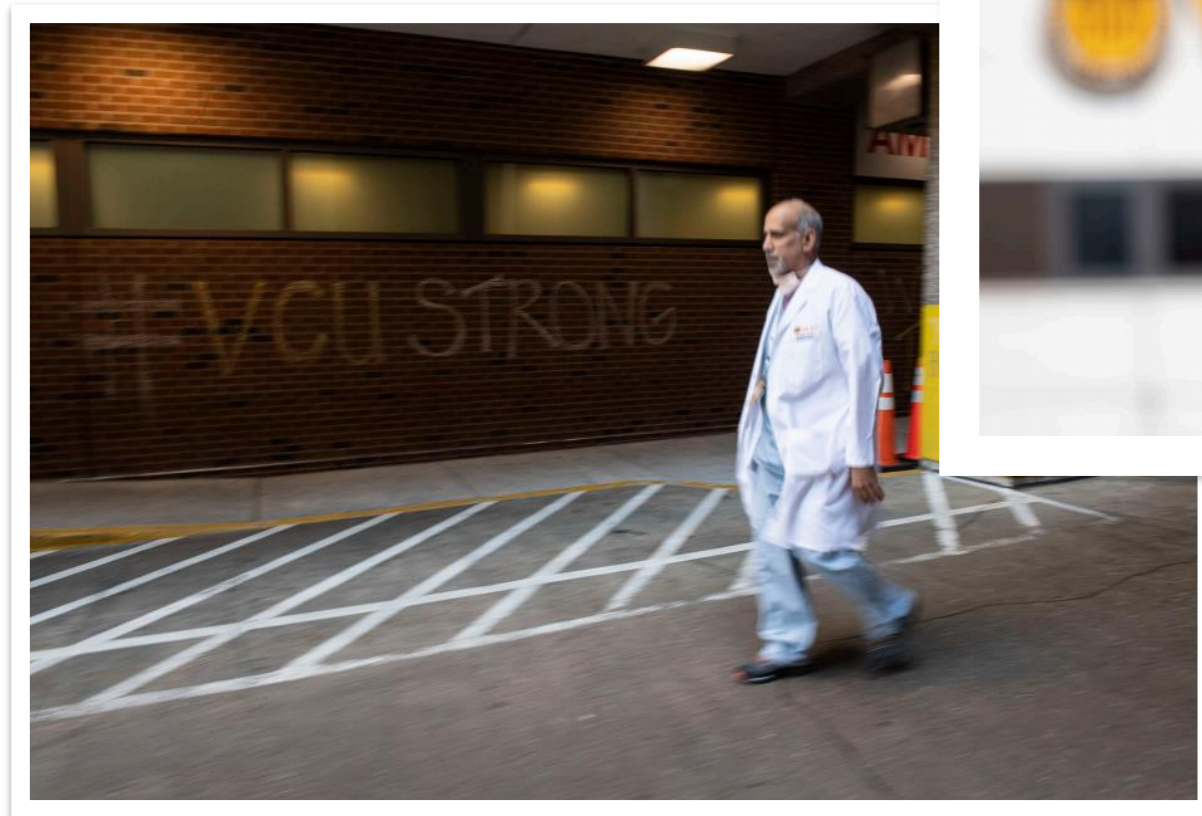
Our students



Our faculty and staff



Our partnerships



Feedback

“I am personally impressed with the level of detail that VCU has provided to families and students...we are very proud to be part of the RAMily!”

“Thanks for pulling off a successful semester. I am sure it wasn't easy.”

Looking ahead: spring semester

- Finalize the spring return to campus plan
- Entry testing for residential students
- Surveillance testing
- Monitor community health
- Communicate often
- Remain flexible
- Adjust to new information

Miscellaneous Reports for Information:

- **Revenue and Expense Summary**
- **Sources and Uses Funding**
- **VCU Health System and Financial Operations**
- **Capital Projects Update**
- **SWAM Report**

ATTACHMENT O

VCU Athletics

presented by Ed McLaughlin

December 11, 2020



Athletics DEI Committee

- Re-established in June of 2020
- Identification of opportunities to embed DEI within the VCU Athletics operational framework – **examples:** Implicit Bias training for new hires; inclusion of DEI metrics in student-athlete surveys, 360° employee feedback surveys, and employee exit surveys; new DEI Rodney award
- Community engagement and outreach:
 - Establishment of a social media presence - #Rams4Change
 - Creation of an Athletics [DEI webpage](#)
 - Collection of school supplies as part of the Ultimate Backpack School Supply Drive
 - Voter education and awareness in collaboration with SAAC

Athletics DEI Committee

- Staff engagement programming:
 - *Let's Talk!* - Crucial Conversation Sessions with African American Student-Athletes & Staff
 - Student-Athlete & Staff Open Forums with Chief Venuti on the topic of campus policing
 - Staff Discussions of *White Fragility* by Robin DiAngelo and *How to Be An Antiracist* by Ibram X. Kendi
 - Recognition & celebration of Juneteenth, Latinx Heritage Month, Native American Heritage Month
 - Equity assessments pertaining to the African American student-athlete and employee experiences

Athletics Governance

- Creation of BOV committee as standing committee
- IAC – faculty committee chaired by FAR
- Faculty Senate and University Council reports
- Advisory Board and RAF Board
- Meeting with FAR and Provost, meeting with FAR and President

ATTACHMENT P

RESOLUTION OF THE BOARD OF VISITORS OF VIRGINIA COMMONWEALTH UNIVERSITY

PROPERTY ACQUISITION

WHEREAS, Chapter 6.1, Title 23 of the Code of Virginia of 1950, as amended (the "Virginia Code"), establishes a public corporation under the name and style of Virginia Commonwealth University (the "University") which is governed by a Board of Visitors (the "Board") vested with the supervision, management and control of the University;

WHEREAS, Title 23 of the Virginia Code classifies the University as an educational institution of the Commonwealth of Virginia;

WHEREAS, by Chapter 4.10, Title 23 of the Virginia Code, the University entered into a management agreement with the Commonwealth of Virginia which was enacted as Chapter 594 of the Acts of Assembly of 2008 which, as amended, classifies the University as a public institution of higher education and empowers the University with the authority to undertake and implement the acquisition of any interest in land;

WHEREAS, the Board's policy on the Authority to Execute Contracts and Other Documents requires Board approval for the acquisition of real estate;

WHEREAS, the Board deems it desirable and in the best interests of Virginia Commonwealth University (the "University") to acquire that certain real property discussed in Closed Session on this date (the "Property").

NOW, THEREFORE, BE IT RESOLVED, that Virginia Commonwealth University acquire the Property for a price not to exceed \$4,500,000 and upon such other terms and conditions as the President or others authorized to act on his behalf may, in their discretion, deem advisable; and that

RESOLVED FURTHER, the President, Senior Vice President/Chief Financial Officer, and Vice President for Administration are hereby authorized, directed and empowered to execute, for and on behalf of the University and in its name, any and all documents required in connection with the purchase of the Property, including, without limitation, the incurrence of indebtedness to finance the acquisition of the project, either through the use of the University's commercial paper program or otherwise; and that

RESOLVED FURTHER, any actions within the authority conferred hereby, taken prior to the date of the foregoing resolutions, by the aforementioned officers or those delegated to act on their behalf, are hereby ratified, confirmed and approved as the acts and deeds of the University.