

## Committee Minutes

### FINANCE AND AUDIT COMMITTEE

Duck Pond Room, The Inn at Virginia Tech

November 7, 2016

#### Audit Closed Session

**Board Members Present:** Mr. Jim Chapman, Mr. Charles T. Hill, Mr. Wayne Robinson, Mr. Dennis Treacy, Mr. Horacio Valeiras

**VPI & SU Staff:** Ms. Carolyn Fulk, Ms. Kay Heidbreder, Ms. Sharon Kurek, Dr. Timothy Sands, Ms. Savita Sharma, Mr. M. Dwight Shelton Jr.

1. **Update on Fraud, Waste, and Abuse Cases:** The Committee received an update on outstanding fraud, waste, and abuse cases.
2. **Update on the Washington-Alexandria Architecture Center Advisory Review:** The Committee received an update on the status of management action plan implementation for the Washington-Alexandria Architecture Center advisory service review. This review, completed in March 2016, was conducted at the request of the College of Architecture and Urban Studies.
3. **Discussion with the Director of Internal Audit:** The Director of Internal Audit discussed audits of specific departments and units where individual employees were identified.

#### Audit Open Session

**Board Members Present:** Mr. Jim Chapman, Mr. Charles T. Hill, Mr. Alex Parrish- staff representative, Mr. Wayne Robinson, Mr. Dennis Treacy, Mr. Horacio Valeiras

**VPI & SU Staff:** Mr. Bill Abplanalp, Ms. Beth Armstrong, Mr. Whit Babcock, Mr. Bob Broyden, Ms. Bridget Brugger-McSorley, Mr. Allen Campbell, Ms. D'Elia Chandler, Mr. Al Cooper, Mr. John Cusimano, Mr. Lefter Daku, Mr. Brian Daniels, Mr. Michael Dean, Ms. Wanda Dean, Ms. Carolyn Fulk, Mr. Derek Gwinn, Ms. Kay Heidbreder, Ms. Mary Helmick, Mr. Tim Hodge, Ms. Elizabeth Hooper, Ms. Katie Huger, Ms. Sharon Kurek, Ms.

Heather LaFon, Dr. Theresa Mayer, Ms. Heidi McCoy, Ms. Nancy Meacham, Dr. Scott Midkiff, Mr. Ken Miller, Ms. Terri Mitchell, Mr. Mark Owczarski, Mr. Tim Parker, Dr. Scot Ransbottom, Ms. Lisa Royal, Ms. Savita Sharma, Mr. M. Dwight Shelton Jr., Mr. Ken Smith, Mr. Brad Sumpter, Mr. Jon Clark Teglas

**Guests:** Ms. Meghan Finney, Auditor of Public Accounts, Mr. Michael Reinholtz – Audit Director, Auditor of Public Accounts

1. **Motion to Reconvene in Open Session:** Motion to begin open session.
2. **Approval of Items Discussed in Closed Session:** The Committee reviewed and took action on items discussed in closed session.
3. **Opening Remarks and Approval of Minutes of the August 29, 2016 Meeting:** The Committee reviewed and approved the minutes of the August 29, 2016 meeting.
4. **Review and Acceptance of the Auditor of Public Accounts Financial Statement Audit and Management Letter for the June 30, 2016 Audit:** The Committee received a report from Mr. Reinholtz, Audit Director, Auditor of Public Accounts, on the status of the university's financial statement audit and management letter for the fiscal year ended June 30, 2016. The university has prepared its financial statements in accordance with generally accepted accounting principles and will carry an unmodified (clean) audit opinion. The auditors reported that there will be no written management letter comments.
5. **Review of University's Update of Responses to all Previously Issued Internal Audit Reports:** The Committee reviewed the university's update of responses to all previously issued internal audit reports. As of June 30, 2016, the university had 14 open recommendations. Six audit comments have been issued during the first quarter of this fiscal year. As of September 30, 2016, the university has addressed 16 comments, leaving four open recommendations in progress. The Committee received a briefing at the meeting that reviewed the status of the outstanding comments, including the comments that have been addressed since September 30, 2016.
6. **Review of Audit Charters:** The Committee reviewed the Audit Committee Audit Charter and the Charter for the University's Internal Audit Function in accordance with professional standards. After conducting a thorough review, University Internal Audit did not recommend any modifications to the charters at this time.
7. **Review of University Internal Audit's Status Report as of September 30, 2016:** The Committee reviewed University Internal Audit's Status Report as of September 30,

2016. University Internal Audit has completed 10 percent of its audit plan in accordance with the fiscal year 2016-17 annual audit plan.

**8. Review and Acceptance of the following Reports Issued by University Internal Audit:** The committee reviewed and accepted the following four internal audit reports:

- a. **Construction Management:** The audit received a rating of improvements are recommended. An audit recommendation was issued where an opportunity for further improvement was noted in the area of cost projection documentation. Low-priority recommendations were issued to management where opportunities for improvement were identified with regard to capital renovation communication, accurate documentation and reporting, and compliance with prompt payment of invoices.
- b. **Departmental Scholarships:** The audit received a rating of improvements are recommended. Audit recommendations were issued to management where opportunities for further improvement were noted in the areas of timeliness and awarding based on fund criteria. Additionally, low-priority recommendations of a less significant nature were noted where opportunities for improvement were identified with regard to record retention and written procedures as well as enhanced reporting of utilization data.
- c. **IT: Project Management:** The audit received a rating of improvements are recommended. An audit recommendation was issued to management where opportunities for improvement were noted for enhancing the Standard for IT Project Management. Additionally, a low-priority recommendation was issued to the Division of IT where opportunities for improvement were identified regarding project management documentation utilization.
- d. **Undergraduate Admissions:** The audit received a rating of effective. The review indicated that management had an on-going, robust application review process to ensure that a qualified, talented, and diverse student body is admitted.

**9. Overview of the University's NCAA Compliance Program:** In response to the Committee's request, the university presented an overview of the university's NCAA compliance program. Compliance with NCAA, ACC, and university rules is a shared responsibility requiring the support of numerous constituencies both on and off campus. The Virginia Tech Athletics Compliance Office directs this cooperative effort through proactive education of stakeholders, policy and procedure coordination, and monitoring. Due to the high external compliance risk and complex operations associated with this topic, University Internal Audit's core audit plan leverages a multi-year audit approach

that allows for annual reviews of selected components of the NCAA compliance program.

10. **Report on the Office of the State Inspector General Performance Review:** The Committee received an update on the Office of State Inspector General (OSIG) performance review. The OSIG was established in April 2011 to conduct independent investigations, performance reviews and other information designed to provide objective information to the citizens of the Commonwealth and those charged with its governance. In August 2015, the university was informed by OSIG regarding its plans to conduct a performance review of Virginia Tech. The university was identified as a high risk agency based on a statewide risk assessment conducted by Deloitte and Touche LLP for OSIG. Based on the results of the risk assessment, the four areas included in the scope of review were Science, Technology, Engineering, Mathematics, and Health (STEM-H) programs; Faculty Start-up packages; Transfers and return of Collected Revenue; and Electronic Procurement.

The OSIG auditors conducted their review during the course of Fall 2015 and Spring 2016. In October 2016, OSIG informed the university about the completion of the review and issued the final performance review report. OSIG determined that overall, Virginia Tech's processes related to investment in STEM-H programs, monitoring of faculty start-up packages, and transfer and return of collected revenue functions were operating efficiently and effectively. This report included information about the specific audit objective and conclusions from the OSIG Performance review report.

### **Finance Closed Session**

**Board Members Present:** Mr. Jim Chapman, Mr. Charles T. Hill, Mr. Wayne Robinson, Mr. Dennis Treacy, Mr. Horacio Valeiras

**VPI & SU Staff:** Ms. Carolyn Fulk, Ms. Kay Heidbreder, Ms. Sharon Kurek, Dr. Timothy Sands, Ms. Savita Sharma, Mr. M. Dwight Shelton Jr.

1. **Motion for Closed Session:** Motion to begin closed session.
- \* 2. **Ratification of Personnel Changes Report:** The Committee reviewed and took action on the quarterly personnel changes report.

The Committee recommended the personnel changes report to the full Board for approval.

- \* 3. **Approval of 2016-17 Faculty Salary Program:** The Committee reviewed and took action on the 2016-17 Faculty Salary Program.

The Committee recommended the 2016-17 Faculty Salary Program to the full Board for approval.

### **Finance Open Session**

**Board Members Present:** Mr. Charles T. Hill, Mr. Wayne Robinson, Mr. Dennis Treacy, Mr. Horacio Valeiras

**VPI & SU Staff:** Ms. Beth Armstrong, Mr. Bob Broyden, Mr. Allen Campbell, Ms. D'Elia Chandler, Mr. John Cusimano, Mr. Lefter Daku, Mr. Brian Daniels, Ms. Wanda Dean, Ms. Carolyn Fulk, Mr. Mark Gess, Ms. Kay Heidbreder, Ms. Mary Helmick, Mr. Tim Hodge, Ms. Elizabeth Hooper, Ms. Katie Huger, Ms. Sharon Kurek, Dr. Theresa Mayer, Ms. Heidi McCoy, Ms. Nancy Meacham, Dr. Scott Midkiff, Mr. Ken Miller, Ms. Terri Mitchell, Mr. Mark Owczarski, Dr. Scot Ransbottom, Ms. Lisa Royal, Ms. Savita Sharma, Mr. M. Dwight Shelton Jr., Dr. Ken Smith, Mr. Brad Sumpter, Mr. Jon Clark Teglas

1. **Opening Remarks and Approval of Minutes of the August 29, 2016 Meeting:** The Committee reviewed and approved the minutes of the August 29, 2016 meeting.
2. **Update on the State Budget:** The Committee received an update on the state budget. During the Sunday afternoon information session, the Board of Visitors received an update on the current status of the state budget. This discussion focused on questions or issues the Committee wished to pursue in greater detail.
3. **Annual Report on the University's Student Financial Aid Resources:** The Committee received a comprehensive report on the university's scholarship and financial aid program. Financial aid programs are critical to support access and affordability of higher education and to ensure the effective recruitment, retention, and graduation of students. In its Management Agreement with the Commonwealth, the university affirmed its commitment to increase the support for student financial aid. The university continues to proactively work to ensure access and affordability. The amount of total student financial aid awarded increased by \$21.2 million or approximately 5 percent from \$424.8 million in fiscal year 2015 to \$446 million in fiscal year 2016.
4. **Annual Report on Endowment Utilization and Expenditure Plans for Scholarship Funds held by the Virginia Tech Foundation:** The Committee received an annual

report on the Endowment scholarship funds utilization and expenditure plans. The Office of Enrollment and Degree Management continued to facilitate actions to improve the utilization and administration of privately-funded scholarships. In fiscal year 2016, colleges and the Office of University Scholarships and Financial Aid (USFA) continued to make progress in awarding endowed scholarships. Accounting for the approved “building reserve” and “hard to award” funds, colleges and USFA utilized 96.4 percent of available endowed scholarship funds. The unspent balance of endowed scholarships in fiscal year 2016 reduced by 29 percent compared to fiscal year 2015 and by 81 percent since fiscal year 2012. This report provided information on the performance of each college in awarding available scholarships against established budgets for fiscal year 2015-16. The report also provided information regarding the endowed scholarship projected revenue and the spending plan for fiscal year 2016-2017.

5. **Annual Report on University Debt Ratio and Debt Capacity:** The Committee received a report on the university’s debt ratio and debt capacity. At the end of fiscal year 2015-16, outstanding long-term debt of the university totaled \$525.6 million with a debt ratio of 4.18 percent. It is projected that the university’s debt ratio will be 3.97 percent in 2016-17 and then will remain below 5 percent through 2021-22. Both the Restructured Higher Education Financial and Administrative Operations Act and the university’s debt policy require the university to maintain a debt service to operations ratio of not greater than 7 percent. Further, based upon long-standing guidelines by the Finance and Audit Committee, university management internally targets a 5 percent benchmark for planning purposes and subsequent recommendations to the Board. The university is in full compliance with the internal debt ratio target of 5 percent and the Restructuring benchmark of 7 percent. The Committee affirmed its support for continuation of the 5 percent internal debt ratio target.
6. **Annual Report on Write-off of Delinquent Accounts:** The Committee received a report on delinquent accounts of the university that were written off as of June 30, 2016. The amount of write-offs totaled \$552,820 which represents less than one tenth of one percent of the fiscal year 2015 annual operating revenues, excluding federal appropriations. This current year write-off is consistent with the amount of the total write-off in recent years. The university is in full compliance with the accounts receivable management standards established by the state.
7. **Annual Report on Implementation of Increased Administrative Efficiencies through Expansion of Automated Systems:** The Committee received an annual progress report highlighting some of the efficiencies and process improvements that have been achieved since the November 2015 report. The report provided a synopsis of top achievements from the previous year and highlighted the key initiatives planned in the current year. Some of the projects completed include a course registration

application, undergraduate major change application, Electronic Research Administration, and Content Management system. The university has also initiated an upgrade to the Banner 9 system and the implementation of a new constituent relationship management system that is designed around advancement industry best practices.

- \* 8. **Resolution for the Authority to Forgive and Discharge Loan to the VT-ARC:** The Committee reviewed for approval a resolution for the authority to forgive and discharge a loan to the Virginia Tech-Applied Research Corporation (VT-ARC). The Committee received an update on the current status of VT-ARC operations during the August 2016 meeting. This report provided additional information about the VT-ARC operations and included a resolution for the proposed forgiveness and discharge of a \$2 million loan for start-up funding plus any accrued interest expense to the university from VT-ARC.

In November 2013, the Board of Visitors authorized the university to loan VT-ARC up to \$2 million to help fund its start-up operations, and the university has loaned the full amount authorized. While VT-ARC has been successful at obtaining sponsored projects, revenue and cash flow has not achieved the level sufficient to breakeven and to repay the loans and related interest expense to the university and the Virginia Tech Foundation (VTF).

As a part of the evaluation of VT-ARC's potential to make significant contributions to the future research initiatives of the university in the National Capital Region, the university recognized that it is very unlikely during the next several years that VT-ARC would be able to obtain sponsored projects to generate cash flow sufficient to repay the loans held by the university and the VTF.

As a result, the university is proposing to write-off the \$2 million note receivable from VT-ARC. In conjunction with the university's proposed action, in October 2016 the VTF wrote-off and discharged all amounts loaned to VT-ARC, with the exception of \$3 million.

The write-off and full discharge of the loans due from VT-ARC to the university and VTF are critical actions in VT-ARC's efforts to improve the financial viability of the organization. The forgiveness of debt by both the university and the VTF, with a portion of the VTF debt restructured to provide a realistic fixed repayment period, will assist VT-ARC to reduce the fixed costs which contributed to the ongoing operating cash flow deficits produced in prior years.

In order for VT-ARC to write-off the note payable to the university from their financial statements as of June 30, 2016, the university must formally discharge the debt owed by VT-ARC. The Committee asked for the resolution to be modified to include the

development of a business plan to guide the operations of VT-ARC and to strengthen the financial and operational activities of VT-ARC.

The Committee recommended the Resolution for the Authority to Forgive and Discharge a loan to the Virginia Tech-Applied Research Corporation, as amended, to the full board for approval.

- \* 9. **Approval of Year-to-Date Financial Performance Report (July 1, 2016 – September 30, 2016):** The Committee reviewed for approval the Year-to-Date Financial Performance Report for July 1, 2016 – September 30, 2016. For the first quarter, budget adjustments were made to reflect revisions to projected revenues and expenditures. The General Fund revenue budget was decreased by \$2.7 million for the University division and by \$0.9 million for the Cooperative Extension/ Agricultural Experiment Station division primarily due to removal of the General Fund share of the planned compensation program. The annual tuition and fees budget was decreased by \$5.5 million for the finalization of the budgets for tuition and fees, driven primarily by refinement in projected enrollment growth.

For the quarter ending September 30, 2016, \$11.0 million had been expended for Educational and General capital projects, and \$12.5 million had been expended on Auxiliary Enterprises capital projects. Capital outlay expenditures for the quarter ending September 30, 2016 totaled \$23.5 million.

The Committee recommended the Year-to-Date Financial Performance Report to the full Board for approval.

- \* 10. **Review and Acceptance of Pratt Fund Program and Expenditures Report:** The Committee received a report on the Pratt Fund program and expenditures. Pratt bequest expenditures of \$944,791 for Engineering and \$972,444 for Animal Nutrition were made during fiscal year 2015-16.

The Pratt Funds for Engineering provided funding for scholarships and fellowships, graduate studies, and international programs. The Pratt Funds for Animal Nutrition provided scholarships, assistantships, and research funding for students. The Funds also supported scientific equipment purchases and enhancement of research programs.

The Committee recommended the Pratt Fund Program and Expenditures report to the full Board for approval.



## **Joint Open Session**

**Board Members Present:** Mr. Charles T. Hill, Mr. Mike Quillen, Mr. Wayne Robinson, Mr. Steve Sturgis, Mr. Dennis Treacy, Mr. Horacio Valeiras, Mr. Jeff Veatch

**VPI & SU Staff:** Ms. Beth Armstrong, Ms. Kim Avis, Mr. Whit Babcock, Mr. Bob Broyden, Ms. Bridget Brugger-McSorley, Mr. Allen Campbell, Mr. Joe Crane, Mr. John Cusimano, Mr. Lefter Daku, Mr. Brian Daniels, Mr. Michael Dean, Ms. Wanda Dean, Dr. Lance Franklin, Ms. Carolyn Fulk, Mr. Derek Gwinn, Ms. Kay Heidbreder, Ms. Mary Helmick, Mr. Tim Hodge, Ms. Elizabeth Hooper, Ms. Katie Huger, Dr. Chris Kiwus, Ms. Sharon Kurek, Ms. Angela Kates, Ms. Leigh LaClair, Ms. Heather LaFon, Dr. Theresa Mayer, Ms. Heidi McCoy, Ms. Nancy Meacham, Dr. Scott Midkiff, Mr. Ken Miller, Ms. Terri Mitchell, Ms. Laura Neff-Henderson, Mr. Mark Owczarski, Mr. Tim Parker, Mr. Charlie Phlegar, Dr. Scot Ransbottom, Ms. Lisa Royal, Ms. Savita Sharma, Mr. M. Dwight Shelton Jr., Mr. Jason Soileau, Mr. Brad Sumpter, Mr. Dwyn Taylor, Mr. Jon Clark Teglas, Dr. Lisa Wilkes, Dr. Sherwood Wilson

- \* 1. **Approval of Resolution for Construction of the Eastern Shore AREC Equipment Storage Building:** The Committees reviewed for approval a resolution for construction of the Eastern Shore AREC Equipment Storage Building. In March 2016, the Board of Visitors approved a \$46,000 planning project for the Eastern Shore Agricultural Research and Extension Center (AREC) Equipment Storage Building project. The AREC, working with the college and the university, developed full bid documents for the necessary facility to house and secure its equipment. The project's scope includes an approximately 7,500 gross square foot, single story structure located on site and adjacent to the AREC's other facilities. The exterior shell of the facility is a pre-engineered metal building standing on a concrete slab with insulation and heating.

Construction bids for the project were received October 4, 2016 with the low bid resulting in a total project cost of \$535,000, inclusive of the \$46,000 planning authorization. As with all self-supporting projects, the university, working conjointly with the College of Agriculture and Life Sciences, has developed a financing plan to support the entire costs of the \$535,000 project. This request is for a \$489,000 supplement to the existing \$46,000 design authorization to complete the Eastern Shore AREC Equipment Storage Building project.

The Committees recommended the Resolution for Construction of the Eastern Shore AREC Equipment Storage Building to the full Board for approval.

- \* 2. **Approval of Amended Resolution for Capital Lease for Virginia Tech Transportation Institute:** The Committees reviewed for approval an amended

resolution for a capital lease for the Virginia Tech Transportation Institute (VTTI). VTTI is developing a specialized connected- and automated- vehicle research initiative known as the Virginia Automation Park (the “Park”) to support VTTI’s strategic initiative for research expansion. During the August 29, 2016 Board meeting, the Committees approved a resolution requesting approval to enter into a capital lease with ExpandTran, LLC for the development of approximately 28 acres of land through a capital lease with ExpandTran, LLC and an easement between ExpandTran, LLC and TORC Robotics, Inc. to house an Automation Park.

Under VTTI’s proposed revised plan, a modified scope of the Park will be implemented on the approximately seven (7) acres of land leased from ExpandTran, LLC and will not use an easement of TORC Robotics, Inc. land. The estimated costs of the revised scope are \$2.5 million, and Virginia Tech has developed a nongeneral fund resource plan sufficient to support the full costs of the lease. Virginia Tech desires to update the Board of Visitors on the above-stated changes to the capital lease and corresponding Park plan approved and authorized by the Board of Visitors on August 29, 2016, and secure approval of and authorization for the revised capital lease parameters.

The Committees recommended the Amended Resolution for Capital Lease for Virginia Tech Transportation Institute to the full Board for approval.

- \* 3. **Approval of Resolution for the Acquisition of 201 West Roanoke Street, Blacksburg, VA:** The Committees reviewed for approval a resolution for the acquisition of 201 West Roanoke Street, Blacksburg, Virginia property (the “Property”), adjacent to the Virginia Tech campus. The Property, in close proximity to the university’s main campus, will support the university’s Creative and Innovation District initiative, and is a property being identified as having a strategic value to Virginia Tech in the current Campus Master Plan update. Virginia Tech has leased the Property since October 27, 2006 from the current owners, Roanoke Street Building Partnership. Virginia Tech desires to purchase the Property for both its current leased use and its future strategic value to the university.

The university has entered into negotiations with the owners of the Property for the purchase of the Property at a cost of \$550,000 subject to the satisfactory completion of all applicable university acquisition policy and procedures, including, but not limited to, Board of Visitors authorization to consummate the transaction. Virginia Tech has developed a funding plan sufficient to support the full costs of the acquisition. This request is to seek authorization for Virginia Tech to move forward with the acquisition of the Property at a cost of \$550,000 plus any due diligence and related closings costs, and for the Vice President for Administration, his successors and/or assigns, to execute

a Purchase/Sales Contract, as well as any and all other documents necessary to affect the purchase of 201 West Roanoke Street, Blacksburg VA.

The Committees recommended the Resolution for the Acquisition of 201 West Roanoke Street, Blacksburg, VA to the full Board for approval.

- \* 4. **Approval of Resolution for Construction of Rector Field House Improvements:** The Committees reviewed for approval a resolution for the Construction of Rector Field House Improvements. The Board of Visitors approved a \$3.5 million blanket planning project in November 2015 for various Athletics facilities improvements including an expansion and refurbishment to Rector Field House to support softball, track, and field throwing events. Planning and design work for Rector Field House is progressing with improvements to the restrooms, fire suppression, mechanical systems, and roof of the existing building and approximately 44,000 gross square feet of new construction for two building additions.

The project schedule includes an occupancy date of February 2018 for a portion of the facility to meet the Athletics' program obligation to host the Atlantic Coast Conference Indoor Track and Field Championships. The occupancy date for the remainder of the project is scheduled for fall 2018. At its August 2016 meeting, the Board of Visitors approved a \$2.4 million early site package as part of a two-phase implementation plan to ensure a timely occupancy of the project. The implementation plan is on track for entering phase two, a construction package for the remainder of the project, in January 2017. This timing will ensure a February 2018 occupancy of the field throwing events area, entrance, and restrooms which are necessary to host the event.

At this time Athletics and the university are requesting authorization to move forward with a construction contract to complete the project. The total project budget for Rector Field House Improvements is \$18.6 million inclusive of the \$2.6 million for planning work and the \$2.4 million early site package previously authorized. The supplemental budget to complete the Rector Field House improvements project is \$13.6 million.

The Committees recommended the Resolution for Construction of Rector Field House Improvements to the full Board for approval.

There being no further business, the meeting adjourned at 12:03 p.m.

**\*Requires full Board approval.**

# Update of Responses to Open Internal Audit Comments

## FINANCE AND AUDIT COMMITTEE

September 30, 2016

As part of the internal audit process, university management participates in the opening and closing conferences and receives copies of all Internal Audit final reports. The audited units are responsible for implementing action plans by the agreed upon implementation dates, and management is responsible for ongoing oversight and monitoring of progress to ensure solutions are implemented without unnecessary delays. Management supports units as necessary when assistance is needed to complete an action plan. As units progress toward completion of an action plan, Internal Audit performs a follow-up visit within two weeks after the target implementation date. Internal Audit is responsible for conducting independent follow up testing to verify mitigation of the risks identified in the recommendation and formally close the recommendation. As part of management's oversight and monitoring responsibility, this report is provided to update the Finance and Audit Committee on the status of outstanding recommendations. Management reviews and assesses recommendations with university-wide implications and shares the recommendations with responsible administrative departments for process improvements, additions or clarification of university policy, and inclusion in training programs and campus communications. Management continues to emphasize the prompt completion of action plans.

The report includes outstanding recommendations from Compliance Reviews and Audit Reports. Consistent with the report presented at the August Board meeting, the report of open recommendations includes three attachments:

- Attachment A summarizes each audit in order of final report date with extended and on-schedule open recommendations.
- Attachment B details all open high or medium priority recommendations for each audit in order of the original target completion date, and with an explanation for those having revised target dates or revised priority levels.
- Attachment C charts performance in implementing recommendations on schedule over the last seven years. The 100 percent on-schedule rate for fiscal year 2017 reflects closing 16 of 16 recommendations by the original target date.

The report presented at the August 29, 2016 meeting covered Internal Audit reports reviewed and accepted through June 30, 2016 and included 14 open medium and high priority recommendations. Activity for the quarter ended September 30, 2016 resulted in the following:

Open recommendations as of June 30, 2016	14
Add: Medium & High priority recommendations accepted August 29, 2016	6
Subtract: recommendations addressed since June 30, 2016	16
Remaining open recommendations as of September 30, 2016	<u>4</u>

While this report is prepared as of the end of the quarter, management continues to receive updates from Internal Audit regarding auditee progress on action plans. Through October 7, 2016 Internal Audit has not closed any of the outstanding medium and high priority recommendations. The remaining open recommendations are progressing as expected and are on track to meet their respective target due dates. This includes the recommendations within the Graduate Admissions Application System (GAAS) report, for which the Committee requested detailed quarterly implementation updates. An implementation status of the GAAS items will be provided during the presentation of this report each quarter. Management works jointly with all units and provides assistance as needed to ensure action plans are completed timely.

**ATTACHMENT A**

**Open Recommendations by Priority Level**

**FINANCE AND AUDIT COMMITTEE**

**September 30, 2016**

Report Date	Audit Name	Audit Number	Total Recommendations						
			ISSUED	COMPLETED	OPEN				
					Extended		On-schedule		Total
					High	Medium	High	Medium	Open
13-May-16	Institute for Critical Technology and Applied Science	16-1255	2	1				1	1
04-Aug-16	Graduate Admissions Application System	16-1257	4	1			2	1	3
<b>Totals:</b>			<b>6</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>4</b>

**ATTACHMENT B**

**Internal Audit Open Recommendations**

**FINANCE AND AUDIT COMMITTEE**

**September 30, 2016**

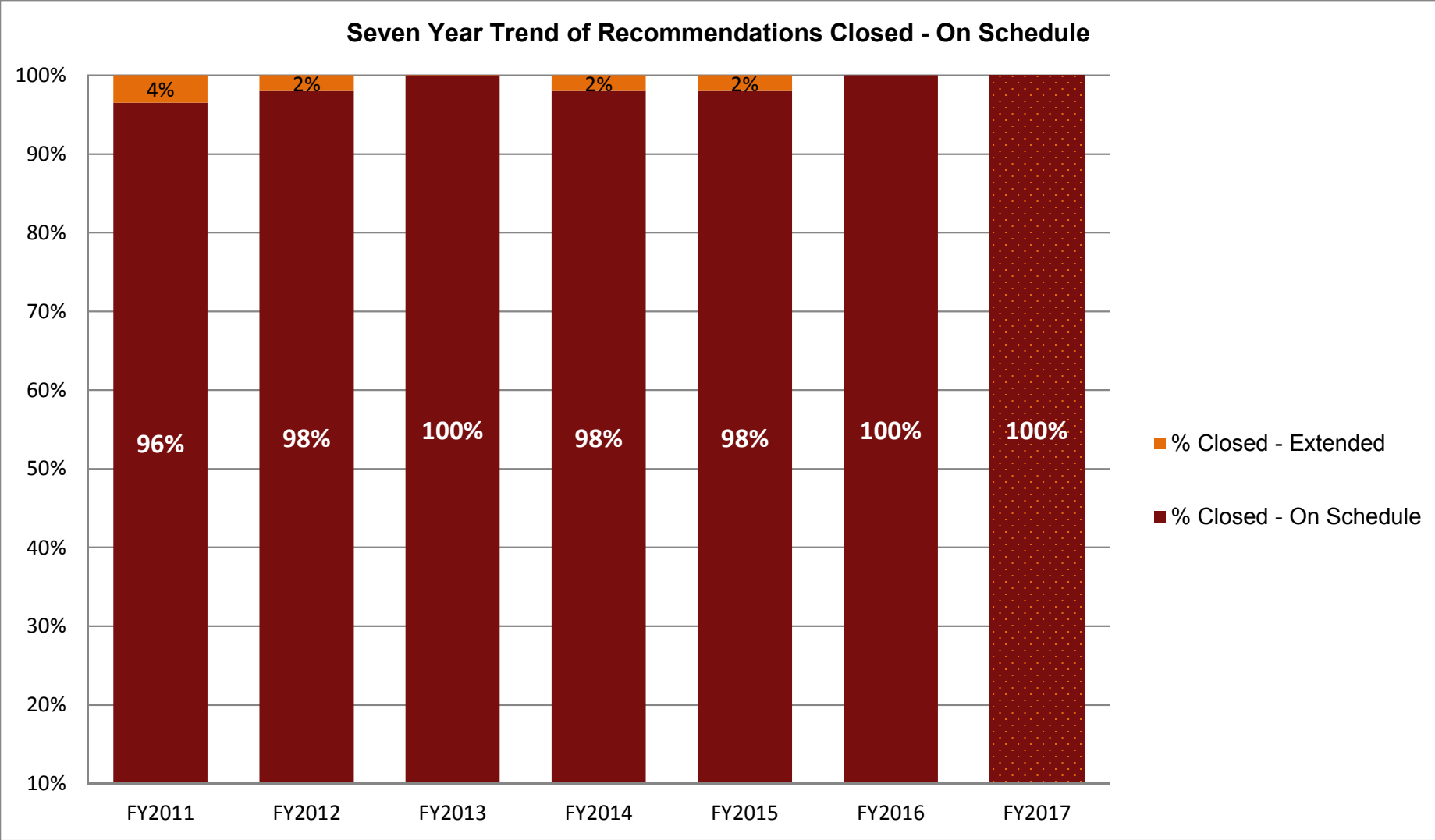
Report Date	Item	Audit Number	Audit Name	Recommendation Name	Priority		Target Date		Follow Up Status	Status of Recommendations with Revised Priority / Target Dates
					Original	Revised	Original	Revised		
13-May-16	1	16-1255	Institute for Critical Technology and Applied Science	Lab Safety Training and Oversight	Medium		15-Dec-16		1	
04-Aug-16	2	16-1257	Graduate Admissions Application System	Protection of Personally Identifying Information	High		31-Jan-17		2	
04-Aug-16	3	16-1257	Graduate Admissions Application System	Audit Trails	High		31-Jan-17		2	
04-Aug-16	4	16-1257	Graduate Admissions Application System	Review of System Access	Medium		31-Jan-17		2	

- (1) As of September 30, 2016, management confirmed during follow up discussions with Internal Audit that actions are occurring and the target date will be met. The Internal Audit department will conduct testing after the due date to confirm that the Management Action Plan is implemented in accordance with the recommendations.
- (2) Target date is beyond current calendar quarter. Management has follow-up discussions with the auditor to monitor progress, to assist with actions that may be needed to meet target dates, and to assess the feasibility of the target date.

ATTACHMENT C

Management Performance and Trends Regarding Internal Audit Recommendations

FINANCE AND AUDIT COMMITTEE



# VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY FINANCE AND AUDIT COMMITTEE OF THE BOARD OF VISITORS

## AUDIT CHARTER

### I. PURPOSE

The primary purpose of the Finance and Audit Committee is to assist the Board of Visitors in fulfilling its fiduciary responsibilities related to oversight of:

- The integrity of the university's financial accounting and reporting practices,
- The university's compliance with legal and regulatory requirements,
- Fiscal planning and the execution of fiscal plans,
- The maintenance of an effective system of internal controls, and
- The performance of the university's internal and independent audit functions.

The function of the Committee is oversight. University management is responsible for the preparation, presentation, and integrity of the university's financial statements, fiscal plans, and other financial reporting. University management is also responsible for maintaining appropriate financial accounting and reporting policies, procedures, and controls designed to assure compliance with generally accepted accounting principles and applicable laws and regulations. The Department of Internal Audit examines and evaluates the adequacy and effectiveness of the university's system of internal controls. The university's external auditor, the state Auditor of Public Accounts, is responsible for planning and conducting the financial statement examination in accordance with generally accepted government auditing standards.

The Committee is charged in the Bylaws of the Board of Visitors with separating its responsibilities for Finance and Audit, respectively, and with maintenance of a separate audit agenda and finance agenda for each meeting. This document and the related meeting planner are intended to identify and document the Committee's audit-specific oversight responsibilities in order that such sound practices will continue despite the turnover of Committee members. It also outlines the regularly scheduled review activities that will insure that the university continues to have an independent and objective internal audit function and obtains the greatest possible benefit from its external audits.

### II. COMPOSITION AND INDEPENDENCE

The Finance and Audit Committee will be comprised of three or more Visitors. Each committee member will be financially literate and shall fully comply with the State and Local Government Conflict of Interests Act, Section 2.2-3100 of the *Code of Virginia* as amended.



### **III. MEETINGS**

By statute, the Board of Visitors, including the Finance and Audit Committee, must meet once a year, but traditionally holds four meetings a year. Additional meetings may occur more frequently as circumstances warrant. The Committee Chair should discuss the Audit agenda with the Director of Internal Audit and the university's Chief Financial Officer prior to each Committee meeting to finalize the meeting agenda and review the issues to be discussed.

### **IV. RESPONSIBILITIES**

In performing its audit oversight responsibilities, the Finance and Audit Committee shall:

#### **A. General**

1. Adopt a formal written charter that specifies the Committee's responsibilities and practices. The charter should be reviewed annually and updated as necessary.
2. Maintain minutes of meetings.
3. Authorize audits within the Committee's scope of responsibilities.
4. Report Committee actions to the Board of Visitors with such recommendations as the Committee may deem appropriate.
5. Meet in closed session, consistent with state law, (without members of senior management present, when appropriate) with the external auditors and/or the Director of Internal Audit to discuss matters that the Committee or the auditors believe should be discussed privately. The Director of Internal Audit shall have a regularly scheduled opportunity to meet privately with the Committee at each of its four annual meetings.

#### **B. Internal Controls, Risk Assessment, and Financial Reporting**

1. Consider the effectiveness of the university's internal control systems, including those over information technology and financial reporting.
2. Review the university's processes for assessing significant business risk exposures and the steps management has taken to monitor and control such exposures, including the university's risk assessment and risk management policies.
3. Understand the scope of internal and external audit reviews of internal control, and obtain reports on significant potential issues and recommendations, together with management's responses.
4. Review the annual financial statements with management and the external auditors to determine whether the external auditors are satisfied with the disclosure and content of the financial statements, including the nature and extent of any significant changes in accounting principles.
5. Review management's written responses to significant potential issues and recommendations of the auditors, including the timetable to correct the identified weaknesses in the internal control system.

6. Advise management that they are expected to provide a timely analysis of significant financial reporting issues and practices.

**C. External Auditors**

1. Make inquiries of management and the independent auditors regarding the scope of the external audit for the current year.
2. As necessary, discuss with the external auditors their processes for identifying and responding to key audit and internal control risks.
3. Review the coordination of internal and external audit procedures to promote an effective use of resources and ensure complete and efficient coverage of the university's risks.
4. Meet with the external auditors at the completion of the audit to receive and discuss the audit report(s).

**D. Internal Auditors**

1. Approve the Internal Audit Charter. The charter should be reviewed annually and updated as necessary.
2. Review and approve the annual audit plan and any significant changes to the plan.
3. Review the effectiveness of the internal audit function, including staffing resources, financial budget, training, objectivity and reporting relationships.
4. Review completed audit reports and progress reports on executing the approved annual audit plan.
5. Inquire of the Director of Internal Audit regarding any difficulties encountered in the course of the audits, including any restrictions on the scope of work or access to required information.
6. Review and concur in the appointment, replacement, reassignment, or dismissal of the Director of Internal Audit.
7. Evaluate the Director of Internal Audit's annual performance and make decisions regarding compensation.

**E. Compliance, Ethics and Business Conduct**

1. Require management to periodically report on procedures that provide assurance that the university's mission, values, and codes of conduct are properly communicated to all employees.
2. Periodically review the programs and policies of the university designed by management to assure compliance with applicable laws and regulations and monitor the results of the compliance efforts.
3. Monitor the university's conflict of interest policies and related procedures.

The attached "Audit Agenda Meeting Planner" is an integral part of this document. If the Board of Visitors meets less frequently than anticipated, the Planner will be adjusted accordingly.

**Virginia Polytechnic Institute and State University  
Finance and Audit Committee of the Board of Visitors  
Audit Agenda Meeting Planner**

A=Annually; Q=Quarterly; AN=As Necessary Q1, Q2, Q3, Q4 based on Fiscal Year (July – June)	Frequency			Planned Timing			
	A	Q	AN	Q1 Aug	Q2 Nov	Q3 Mar	Q4 Jun
<b>A. General</b>							
1. Review and update F&A Committee Audit Charter	X				X		
2. Approve and maintain minutes of previous meeting		X		X	X	X	X
3. Authorize audits within the Committee’s scope of responsibilities			X				
4. Report Committee actions to the Board of Visitors with recommendations deemed appropriate		X		X	X	X	X
5. Meet in closed session with Director of Internal Audit, and with external auditors, as needed		X		X	X	X	X
<b>B. Internal Controls/Risk Assessment/Fin Reporting</b>							
1. Consider the effectiveness of the university’s internal control systems			X				
2. Review the university’s processes for assessing significant business risk exposures and the steps taken to monitor and control such exposures			X				
3. Understand the scope of internal and external audit reviews of internal control, and obtain reports on significant potential issues and recommendations, together with management’s responses		X		X	X	X	X
4. Review the annual financial statements with management and external auditors to determine whether the external auditors are satisfied with the disclosure and content of the financial statements, including the nature and extent of any significant changes in accounting principles	X				X		
5. Review management’s written responses to significant potential issues and recommendations of the auditors, including the timetable to correct identified weaknesses in the internal control system		X		X	X	X	X
6. Advise management that they are expected to provide a timely analysis of significant current financial reporting issues and practices	X				X		

A=Annually; Q=Quarterly; AN=As Necessary	Frequency			Planned Timing			
Q1, Q2, Q3, Q4 based on Fiscal Year (July – June)	A	Q	AN	Q1	Q2	Q3	Q4
				Aug	Nov	Mar	Jun
<b>C. External Auditors</b>							
1. Make inquiries of management and the independent auditors regarding the scope of the external audit for the current year	X						X
2. Discuss with the external auditors their processes for identifying and responding to key audit and internal control risks			X		X	X	
3. Review the coordination of internal and external audit procedures to promote an effective use of resources and ensure complete and efficient coverage of the university's risks			X	X		X	
4. Meet with the external auditors at the completion of the audit to receive and discuss the audit report(s)	X				X		
<b>D. Internal Auditors</b>							
1. Review and approve Internal Audit Charter, if changes are needed	X				X		
2. Review the draft annual audit plan	X						X
3. Approve the annual audit plan	X			X			
4. Review the effectiveness of the internal audit function, including staffing resources, financial budget, training, objectivity, and reporting relationships	X			X			
5. Review completed audit reports and progress reports on executing the approved annual audit plan		X		X	X	X	X
6. Inquire of the Director of Internal Audit regarding any difficulties encountered in the course of the audits, including any restrictions on the scope of work or access to required information		X		X	X	X	X
7. Review and concur in the appointment, replacement, reassignment, or dismissal of the Director of Internal Audit			X				
8. Evaluate the Director of Internal Audit's annual performance and make decisions regarding compensation	X			X			
<b>E. Compliance, Ethics, and Business Conduct</b>							
1. Require management to periodically report on procedures that provide assurance that the university's mission, values, and codes of conduct are properly communicated to all employees			X				
2. Review the programs and policies of the university designed to assure and monitor compliance			X				
3. Monitor the university's conflict of interest policies and related procedures		X		X	X	X	X

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**Subject: Charter for the University’s Internal Audit Function**

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## **1. Purpose**

This policy outlines the policies and procedures covering University Internal Audit at Virginia Polytechnic Institute and State University and serves as a charter for the department.

## **2. Policy**

It is the policy of the Finance and Audit Committee of the Board of Visitors and the management of Virginia Polytechnic Institute and State University to support the maintenance of an internal audit function to assist in the effective discharge of their fiduciary responsibilities in assessing the effectiveness internal control environment.

The Finance and Audit Committee of the Board of Visitors and university management adopt the following definition of internal auditing (from the Institute of Internal Auditors' International Professional Practices Framework) as the purpose of the internal audit function: Internal auditing is an independent, objective assurance and advisory activity designed to add value and improve an organization’s operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes.

### **2.1 Scope of Internal Audit Activities**

The internal audit function will provide assurance engagements encompassing reviews of all university operations and activities to appraise:

- The accuracy, reliability, and timeliness of significant financial, managerial, and operating information and the adequacy of the internal controls employed over the compilation and reporting of such information.
- Compliance with policies, procedures, standards, laws, and regulations.
- Whether risks are appropriately identified and managed.
- Measures taken to safeguard assets, including tests of existence and ownership.

- The adequacy, propriety, and cost-effectiveness of accounting, financial, and other controls throughout the university, as well as compliance therewith.
- Measures taken to foster continuous improvement in control processes.
- Whether university resources are being acquired, managed, and protected in an economical, efficient, and effective manner.
- The achievement of programs, plans, and objectives.

## 2.2 Organizational Structure

The Finance and Audit Committee of the Board of Visitors has the responsibility to oversee and evaluate the internal audit function of the university. Accordingly, the Director of Internal Audit reports functionally to the committee and also serves in a staff role to the committee. For day-to-day operations, the Director of Internal Audit reports administratively to the President.

## 2.3 Independence and Objectivity

Independence is essential to enable the internal audit function to accomplish its purpose. Accordingly, the Director of Internal Audit has direct and unrestricted access to the President and the Finance and Audit Committee of the Board of Visitors. The internal audit function shall be functionally independent of all university operations.

The Director of Internal Audit or members of the department must have an impartial, unbiased attitude and avoid any conflict of interest. Members of the internal audit function shall not be assigned to operating duties except for temporary assignments as requested by the President and the university's Chief Financial Officer and approved by the Finance and Audit Committee of the Board of Visitors. In addition, members of the internal audit function will not develop and install procedures, prepare records, make management decisions, or engage in any other activity which could be reasonably construed to compromise their independence. The Director of Internal Audit or members of the department shall not be assigned any additional supervisory or oversight responsibilities which could be reasonably construed to compromise their independence. Therefore, internal audit review and appraisal procedures do not in any way substitute for the responsibilities assigned to other persons in the organization.

## 2.4 Authority

The internal audit function has unrestricted access to all university departments, records, reports, activities, property, and personnel that they deem necessary to discharge their audit responsibilities. The internal audit function will exercise discretion in the review of records to assure the necessary confidentiality of matters that come to its attention.

## 2.5 Auditing Standards

The internal audit function will conduct its activities in accordance with the Institute of Internal Auditors *International Standards for the Professional Practice of Internal Auditing* and *Code of Ethics*. Generally accepted auditing standards promulgated by the American Institute of Certified Public Accountants and government auditing standards issued by the United States Government Accountability Office will be referenced as appropriate.

Members of the internal audit function have the responsibility to maintain high standards of conduct, professionalism, independence, and character to carry on proper and meaningful internal auditing within the university. In addition, the internal audit function's activities and conduct shall be consistent with the policies of the university.

## 2.6 Systems Planning and Development

The internal audit function will be consulted by management during the planning, development, and modification of major financial or operating systems and procedures (manual and automated) to ensure that:

- Reasonable and adequate internal controls exist.

- Systems or procedural documentation is complete and appropriate.
- An adequate audit trail exists.

The internal audit function's participation will be designed to: a) help assure that information assets are safeguarded and appropriate procedures are complied with, and b) aid management efficiency by avoiding costly systems or procedural changes at later dates.

## 2.7 Responsibilities of the Director of Internal Audit

The Director of Internal Audit has primary responsibility for the proper maintenance and management of the internal audit function to ensure that the audit work fulfills the purposes and responsibilities established in this policy statement.

The Director of Internal Audit is specifically charged with the following responsibilities:

- Coordinating all auditing activities to provide a central source of information for management and the Finance and Audit Committee of the Board of Visitors regarding all audit activities and to provide comprehensive, cost-effective audit coverage for the university.
- Going beyond accounting and financial records when necessary during audit activities to obtain a thorough understanding of the activities under audit.
- Establishing written policies and procedures for the internal audit function and directing its technical and administrative functions.
- Developing, submitting for approval, and executing comprehensive risk-based annual and long-range audit plans to carry out departmental responsibilities.
- Maintaining a professional audit staff with sufficient knowledge, skills, experience, and professional certifications to meet the requirements of this charter, and provide information on the sufficiency of department resources.
- Documenting appropriately the results of all audits, reviews, and evaluations performed.
- Recommending improvements in controls designed to safeguard university resources and ensure compliance with government laws and regulations.
- Issuing an annual summary report of audit activities to the Finance and Audit Committee of the Board of Visitors.
- Appraising the adequacy of the action taken by management to correct significant reported internal control weaknesses and deficient conditions and reporting this information at least quarterly to the responsible Vice Presidents and the university's Chief Financial Officer, or their designees.
- Establishing and maintaining a quality assurance review program to evaluate the operations of the department, including periodic internal self-assessments and external peer reviews at least once every five years by qualified persons who are independent of the university. Results of such reviews will be presented to senior management and the Board of Visitors.
- Communicating directly with the Finance and Audit Committee of the Board of Visitors any matters considered to warrant its attention.
- Performing sufficient tests and examinations to determine and report to management, the Finance and Audit Committee of the Board of Visitors, and the appropriate authorities the extent of any fraud, waste, and abuse detected by audit or otherwise and to identify the weaknesses in control procedures that may have allowed the fraudulent activity to occur. The investigation of the specific event with the objective or recovery and/or prosecution is the responsibility of the appropriate police departments and Commonwealth's Attorney based on jurisdiction.

## **2.8 Audit Reports**

The internal audit function will issue audit reports and/or memorandums in all audit activities performed. The format and style of the report will be determined by the Director of Internal Audit, depending upon the nature and conditions surrounding the audit. Communications must include the engagement's objectives and scope as well as applicable conclusions, recommendations, and action plans. The formulation of overall opinions requires consideration of the engagement results and their significance. All reports on engagements scheduled in the annual audit plan will be issued to the members of the Finance and Audit Committee of the Board of Visitors, the President, appropriate senior management, and other appropriate personnel as deemed necessary by the Director of Internal Audit. In addition, reports approved at open meetings of the committee shall be made available to the public in accordance with state statutes. In certain circumstances, the Director of Internal Audit may decide, with the approval of the Chair of the Finance and Audit Committee of the Board of Visitors, to restrict the issuance of an audit report to certain members of management and/or the committee.

## **2.9 Responsibility for Corrective Action**

Senior management to whom the audited department, activity, or agency reports organizationally is responsible for the issuance of a written response to recommendations made or deficient conditions reported by the internal audit function. The responses should be submitted to the Director of Internal Audit for inclusion in the issued audit report. The committee will receive quarterly status updates of all recommendations in the process of being implemented.

## **2.10 Coordination with External Auditing Agencies**

The Director of Internal Audit will coordinate the department's audit efforts with those of the Auditor of Public Accounts or other external auditing agencies by participating in the planning and definition of the scope of proposed audits so the work of all auditing groups is complementary, and their combined efforts provide comprehensive, cost-effective audit coverage for the university. Duplication of work will be avoided as much as possible.

## **2.11 Special Projects**

The Director of Internal Audit is empowered to conduct special audit projects, reviews, advisory services, or investigations at the request of the President, Vice Presidents or their designee, and the Finance and Audit Committee of the Board of Visitors to assist management in meeting its objectives, promoting economy and efficiency in the administration of, or preventing and detecting fraud, waste, and abuse in its programs and operations, examples of which may include facilitation, training, and advisory services.

## **3. Procedures**

Principal guidance and direction on how the internal audit function accomplishes its mission and responsibilities is provided to the audit staff through the Virginia Tech Internal Audit Manual (Manual). The Manual is designed to promote adherence to the International Professional Practice Framework developed by the Institute of Internal Auditors. The Manual also provides a resource to external parties such as the Finance and Audit Committee of the Board of Visitors, senior management, external auditors, and quality assurance parties.

## **4. Definitions**

### **Abuse**

Excessive or improper use of a thing or policy, or employment of something in a manner contrary to the natural or legal rules for its use. Intentional destruction, diversion, manipulation, misapplication, mistreatment, or misuse of Commonwealth resources. Extravagant or excessive use as to abuse one's position or authority. Abuse can occur in financial or nonfinancial settings.



### **Add Value**

The internal audit function adds value to the organization (and its stakeholders) when it provides objective and relevant assurance, and contributes to the effectiveness and efficiency of governance, risk management, and control processes.

### **Advisory Services**

Advisory and related client service activities, the nature and scope of which are agreed with the client, are intended to add value and improve an organization's governance, risk management, and control processes without the internal auditor assuming management responsibility.

### **Assurance**

An objective examination of evidence for the purpose of providing an independent assessment on governance, risk management, and control processes for the organization. Examples may include financial, performance, compliance, system security, and due diligence engagements.

### **Charter**

The internal audit charter is a formal document that defines the internal audit function's purpose, authority, and responsibility. The internal audit charter establishes the internal audit function's position within the organization; authorizes access to records, personnel, and physical properties relevant to the performance of engagements; and defines the scope of internal audit activities.

### **Code of Ethics**

The *Code of Ethics* of The Institute of Internal Auditors are principles relevant to the profession and practice of internal auditing, and rules of conduct that describe behavior expected of internal auditors. The purpose of the *Code of Ethics* is to promote an ethical culture in the global profession of internal auditing.

### **Compliance**

Adherence to policies, plans, procedures, laws, regulations, contracts, or other requirements.

### **Conflict of Interest**

Any relationship that is, or appears to be, not in the best interest of the organization. A conflict of interest would prejudice an individual's ability to perform his or her duties and responsibilities objectively.

### **Control**

Any action taken by management, the board, and other parties to manage risk and increase the likelihood that established objectives and goals will be achieved. Management plans, organizes, and directs the performance of sufficient actions to provide reasonable assurance that objectives and goals will be achieved.

### **Control Environment**

The attitude and actions of the board and management regarding the importance of control within the organization. The control environment provides the discipline and structure for the achievement of the primary objectives of the system of internal control (e.g. integrity and ethical values; management's philosophy and operating style; organizational structure; and the assignment of authority and responsibility).

### **Control Processes**

The policies, procedures (both manual and automated), and activities that are part of a control framework, designed and operated to ensure that risks are contained within the level that an organization is willing to accept.

### **Director of Internal Audit**

The individual that serves as the chief audit executive and is responsible for effectively managing the internal audit activity in accordance with the internal audit charter and the Definition of Internal Auditing, the *Code of Ethics*, and the *Standards*.

### **Engagement**

A specific internal audit assignment, task, or review activity, such as an internal audit, control self-assessment review, fraud examination, or consultancy. An engagement may include multiple tasks or activities designed to accomplish a specific set of related objectives.

### **Fraud**

The intentional deception perpetrated by an individual or individuals, or an organization or organizations, either internal or external to the university, which could result in a tangible or intangible benefit to themselves, others, or the Commonwealth or could cause detriment to others or the Commonwealth. Fraud includes a false representation of a matter of fact, whether by words or by conduct, by false or misleading statements, or by concealment of that which should have been disclosed, which deceives and is intended to deceive.

### **Governance**

The combination of processes and structures implemented by the board to inform, direct, manage, and monitor the activities of the organization toward the achievement of its objectives. The governance process includes: promoting appropriate ethics and values within the organization; ensuring effective organizational performance management and accountability; communicating risk and control information to appropriate areas of the organization; and coordinating the activities of and communicating information among the board, external and internal auditors, and management.

### **Independence**

The freedom from conditions that threaten the ability of the internal audit function to carry out internal audit responsibilities in an unbiased manner.

### **Internal Audit Function**

The department, division, team of advisors, or other practitioner(s) that provides independent, objective assurance and advisory services designed to add value and improve an organization's operations.

### **International Professional Practices Framework**

The conceptual framework that organizes the authoritative guidance promulgated by the Institute of Internal Auditors. Authoritative guidance is comprised of two categories – (1) mandatory and (2) strongly recommended.

### **Objectivity**

An unbiased mental attitude that allows internal auditors to perform engagements in such a manner that they believe in their work product and that no quality compromises are made. Objectivity requires that internal auditors do not subordinate their judgment on audit matters to others.

### **Risk**

The possibility of an event occurring that will have an impact on the achievement of objectives. Risk is measured in terms of impact and likelihood.

### **Risk Management**

A process to identify, assess, manage, and control potential events or situations to provide reasonable assurance regarding the achievement of the organization's objectives.

### Scope

A statement that specifies the focus, extent, and boundary of a particular audit. The scope can be specified by defining the physical location of the audit, the organizational units that will be examined, the processes and activities that will be included, and the time period that will be covered.

### Significance

The relative importance of a matter within the context in which it is being considered, including quantitative and qualitative factors, such as magnitude, nature, effect, relevance, and impact. Professional judgment assists internal auditors when evaluating the significance of matters within the context of the relevant objectives.

### Standards

A professional pronouncement that delineates the requirements for performing a broad range of internal audit activities, and for evaluating internal audit performance.

### Waste

The intentional or unintentional, thoughtless or careless expenditure, consumption, mismanagement, use, or squandering of Commonwealth resources to the detriment or potential detriment of the Commonwealth. Waste also includes incurring unnecessary costs due to inefficient or ineffective practices, systems, or controls.

## 5. References

Section 2.1-155.3 of the *Code of Virginia*, enacted in 1984.

*State Fraud, Waste, and Abuse Hotline Policies and Procedures Manual*, Office of the State Inspector General, Commonwealth of Virginia, 2014 edition.

*International Standards for the Professional Practice of Internal Auditing (Standards)*, The Institute of Internal Auditors, issued in 2008, revised in 2012.

*Code of Ethics*, The Institute of Internal Auditors.

## 6. Approval and Revisions

- Revision 0  
Approved February 9, 1989, by the Director of Internal Audit, David C. Goodyear.
- Revision 1  
Annual review. Section 2.8 - changed so that reports "approved" by the Finance and Audit Committee of the Board of Visitors shall be available to the public.  
Approved March 29, 1990, by the Director of Internal Audit, David C. Goodyear.
- Revision 2  
Changes were made to eliminate minor discrepancies between the audit manual and the policy statement as presented to the Board of Visitors.  
  
Approved November 3, 1995, by the Director of Internal Audit, David C. Goodyear.
- Annual review, November 5, 1998, by Office of the Executive Vice President. No revisions.
- Revision 3

Policy updated to reflect review by the Finance and Audit Committee of the Board of Visitors. Policy serves as a charter for the Internal Audit Department.

Approved March 29, 2004 by the Executive Vice President and Chief Operating Officer, Minnis E. Ridenour.

Approved March 29, 2004 by the Finance and Audit Committee of the Board of Visitors.

- Revision 4

Policy updated to reflect review by the Finance and Audit Committee of the Board of Visitors, in conjunction with the Internal Audit Department's quality assurance review.

Approved March 14, 2005 by the Executive Vice President and Chief Operating Officer, James A. Hyatt.

Approved March 14, 2005 by the Finance and Audit Committee of the Board of Visitors.

- Revision 5

April 1, 2008: Updates to position titles and/or responsibilities due to university reorganization.

- Revision 6

Policy title changed from "Internal Audit Department" to "Internal Audit Charter."

Section 2.2 revised to reflect change in Director of Internal Audit reporting relationship.

Sections 2.5 and 2.7 revised to clarify the role of Internal Audit and the standards under which it conducts its activities.

Section 2.9 revised to clarify the process for senior management areas submitting corrective action plans.

Approved November 7, 2011 by the university President, Charles W. Steger.

Approved November 7, 2011 by the Finance and Audit Committee of the Board of Visitors.

- Revision 7

Full technical review correcting grammatical, punctuation, word usage, sentence structure, and minor content and/or format inconsistencies. The charter was also revised to incorporate the concept of objectivity, and to include applicable procedures and definitions.

Policy title changed from "Internal Audit Charter" to "Charter for the University's Internal Audit Function."

Approved November 9, 2015 by the Finance and Audit Committee of the Board of Visitors and President, Timothy D. Sands.

# University Internal Audit Status Report

## FINANCE AND AUDIT COMMITTEE

September 23, 2016

### Audit Plan Update

Audits were performed in accordance with the fiscal year 2016-17 annual audit plan at a level consistent with the resources of University Internal Audit. Four risk-based audits have been completed since the August board meeting.

The following eleven audit projects are underway: Biochemistry, IT: Network Security, Mining and Minerals Engineering, Physics, University Scholarships and Financial Aid, Virginia Tech Police Department, Investments and Debt Management, IT: Surplus Property, Travel and Employee Reimbursements, and compliance reviews of Other Executive Offices and the College of Architecture and Urban Studies. Additionally, one advisory service project, requested by management in the area of Athletics ACC Compliance, is underway.

So far in fiscal year 2016-17, University Internal Audit has completed 10 percent of its audit plan as depicted in Exhibit 1.

### Exhibit 1 FY 2016-17 Completion of Audit Plan

<b>Audits</b>	
Total # of <b>Audits</b> Planned	35
Total # of Supplemental <b>Audits</b>	1
Total # of Carry Forwards	3
Total # of Planned <b>Audits</b> Canceled and/or Deferred	0
Total <b>Audits</b> in Plan as Amended	39
Total <b>Audits</b> Completed	4
<b>Audits</b> - Percentage Complete	10%
Note: Includes Compliance Reviews and Advisory Services	

# Review and Acceptance of Reports Issued by University Internal Audit

## FINANCE AND AUDIT COMMITTEE

October 7, 2016

### Background

In concurrence with the fiscal year 2016-17 Internal Audit Plan approved by the Finance and Audit Committee at the August 29, 2016 Board of Visitors meeting, four risk-based audits have been completed during this reporting period. This report provides a summary of the ratings issued during the period and the rating system definitions. University Internal Audit made a concerted effort to ensure progress on the annual audit plan.

### Ratings Issued This Period

Construction Management	Improvements are Recommended
Departmental Scholarships	Improvements are Recommended
IT: Project Management	Improvements are Recommended
Undergraduate Admissions	Effective

### Summary of Audit Ratings

University Internal Audit's rating system has four tiers from which to assess the controls designed by management to reduce exposures to risk in the area being audited. The auditor can use professional judgment in constructing the exact wording of the assessment in order to capture varying degrees of deficiency or significance.

#### Definitions of each assessment option

**Effective** – The audit identified opportunities for improvement in the internal control structure, but business risks are adequately controlled in most cases.

**Improvements are Recommended** – The audit identified occasional or isolated business risks that were not adequately or consistently controlled.

**Significant or Immediate Improvements are Needed** – The audit identified several control weaknesses that have caused, or are likely to cause, material errors, omissions, or irregularities to go undetected. The weaknesses are of such magnitude that senior management should undertake immediate corrective actions to mitigate the associated business risk and possible damages to the organization.

**Unreliable** – The audit identified numerous significant business risks for which management has not designed or consistently applied controls prior to the audit. Persistent and pervasive control weaknesses have caused or could cause significant errors, omissions, or irregularities to go undetected. The weaknesses are of such magnitude that senior management must undertake immediate corrective actions to bring the situation under control and avoid (additional) damages to the organization.

**RECOMMENDATION:**

That the internal audit reports reviewed above be accepted by the Finance and Audit Committee.

November 7, 2016



**VIRGINIA TECH**  
**ATHLETICS COMPLIANCE OVERVIEW**

**Report to the Finance and Audit Committee  
of the Board of Visitors**

*November 7, 2016*



Tim Parker  
Derek Gwinn  
Bridget Brugger McSorley  
Heather LaFon

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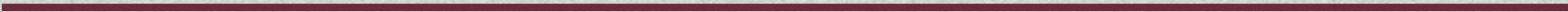
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**“Institutional Control is exercised by the chief executive officer of a member institution.”**



**Institutional Control**

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**It is expected that the day-to-day duties of operation, including compliance with NCAA rules, will be delegated.**

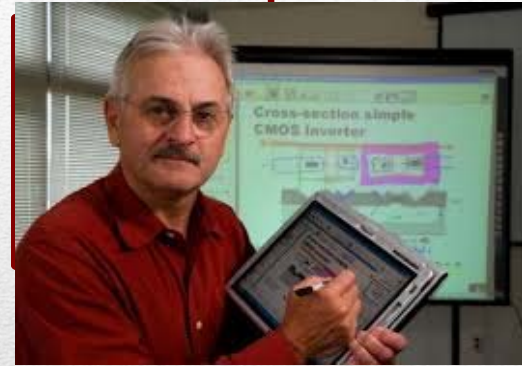


**Delegation**

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## President Sands



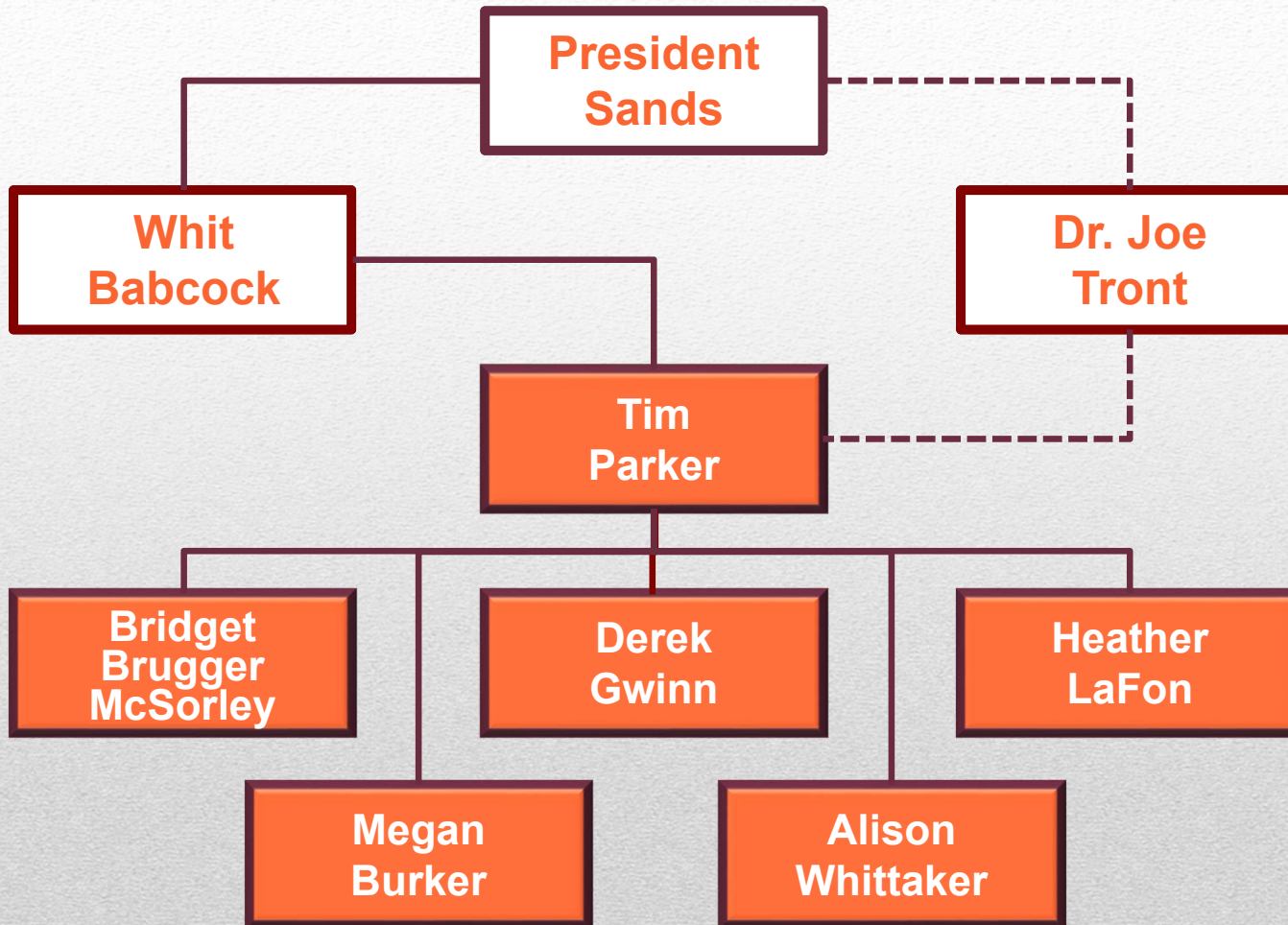
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**Senior officials further delegate various duties regarding compliance. In most institutions, especially those with large and varied athletics programs, such delegations are made to a number of individuals who are expected to exercise control over compliance with regard to specific aspects of the program.**

## **Our Team**

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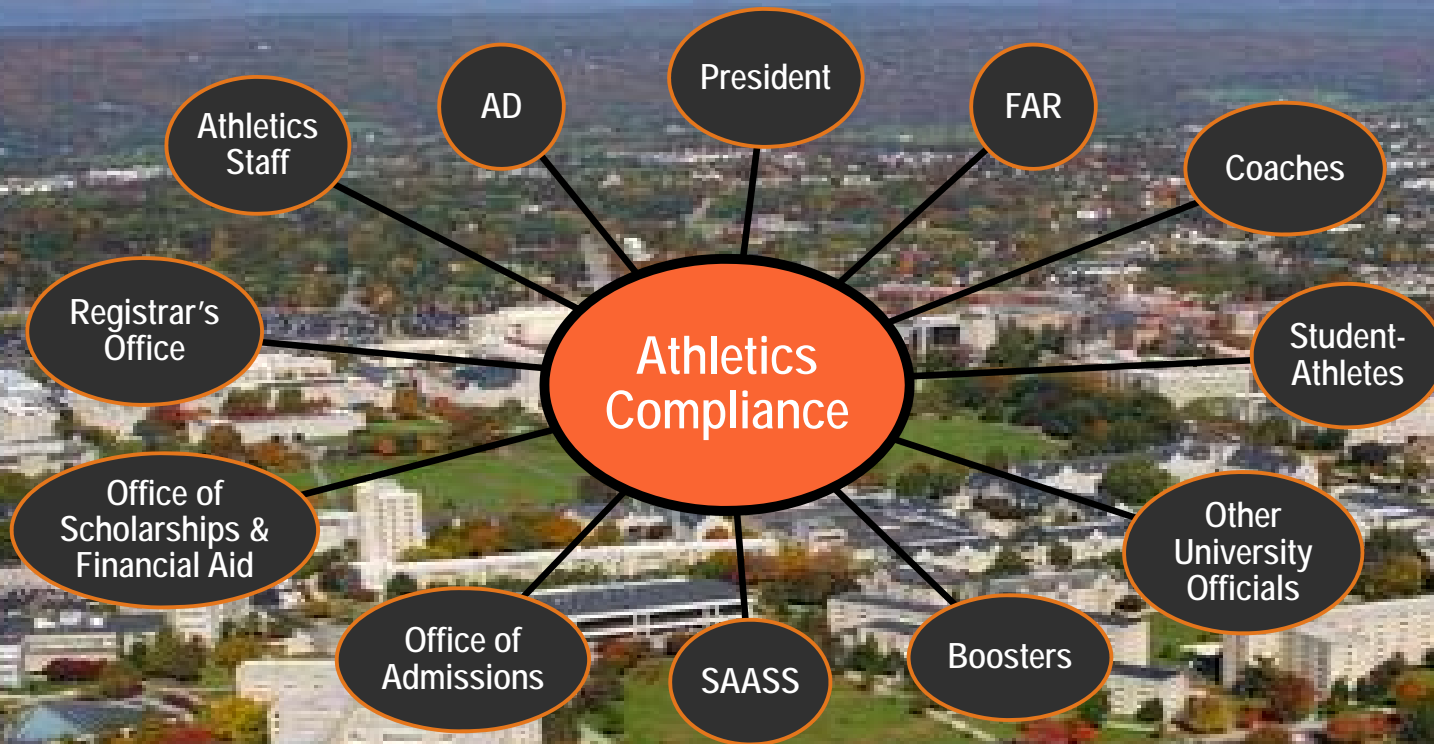
**In addition to the director of athletics and other officials in the athletics department, many others are expected to assume a primary role in ensuring compliance, including: head coaches, the faculty athletics representative, and the other institutional administrators outside of the athletics department responsible for such matters as the certification of student-athletes for financial aid and competition.**

**“Their failure to control those matters and prevent violations of NCAA rules will be considered the result of a lack of Institutional Control.”**



## **Shared Responsibility**

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**Shared Responsibility**





- **Focus on personal integrity and commitment to rules compliance when hiring coaches and athletics administrators.**
- **Consistently promote a culture of compliance.**

**Guiding Principles**



- 
- Establish and build relationships within the athletics department.
  - Establish and build relationships throughout campus.
  - Regularly engage in meaningful external review.

**Guiding Principles**



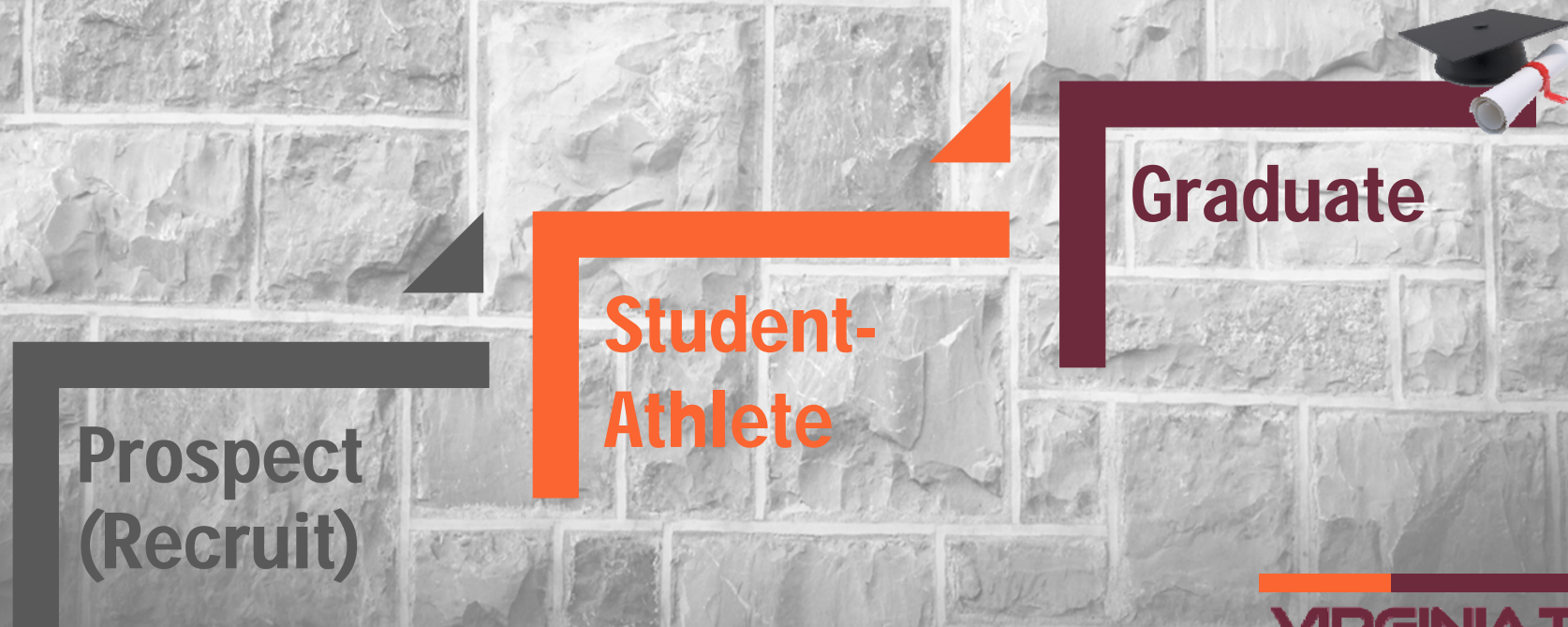
- 
- An aerial night photograph of a baseball field. The field is illuminated by several tall stadium lights, creating a bright green infield and a brown dirt base path. The outfield is dark green. The surrounding area is dark, with some distant city lights visible in the background.
- Implement effective operating systems with clearly articulated policies and procedures.
  - Engage in targeted, consistent monitoring.

**Implementation**



# Implementation

## Compliance Operating Systems & Monitoring



# Prospect

Recruitment  
Initial Eligibility  
Offer of Athletics Aid  
Enroll at Virginia Tech

# Prospect

## Recruitment

- Telephone calls & text messages
- Off-campus contacts and evaluations
- Social media
- Printed recruiting materials
- Campus visits

# Prospect

## Initial Eligibility

- Academics
- NCAA
- Admissions
- Amateurism

# Prospect

## Offer of Athletics Aid

- Team limits
- National Letter of Intent (NLI)
- Written offer of aid



# Prospect

## Enrollment at Virginia Tech

- New student orientation
- Summer academy
- Full-time enrollment

# Student-Athlete

Academics  
Financial Aid  
Amateurism  
S-A well-being

# Student-Athlete



## Academics

- Enrollment
- Declaration of degree
- Credit hour requirements
- Progress toward degree
- GPA

# Student-Athlete



## Financial Aid

- Team limits
- National Letter of Intent (NLI)
- Written offer of aid

# Student-Athlete



## Amateurism

- Agents
- Outside competition

# Student-Athlete




## S-A Experience & Well-Being

- Benefits
- Practice and competition
- Medical
- Academic & other support services
- Student-athlete's family members
- Time demands

# Graduate / Former Student-Athlete

Seasons of competition  
Five-year clock

Completion of degree

- 
- Educate involved constituencies and stakeholders.
  - Review all systems and activities, seek feedback, and evaluate for efficacy.

**Implementation**







# Key Stakeholders

- Coaches
- Student-Athletes
- Athletics staff
- Parents
- Boosters/Donors/Fans
- Local businesses

## Rules Education Program



# Educational Strategies

- In-person meetings
- Compliance guides/brochures
- Rules interpretations
- Community outreach
- Social media @VT\_Compliance

**Rules Education Program**

# Multi-Year Internal Audit Rotation

YEAR	AUDIT	PRELIMINARY SCOPE DESCRIPTIONS
1	NCAA: Financial Aid	Financial aid, playing and practice seasons, camps and clinics
2	NCAA: Eligibility	Eligibility, academic performance program, amateurism, rules education, and employment of athletics coaching staff
3	NCAA: Recruiting	Recruiting, institutional control, certification of compliance, awards, benefits, and expenses
4	Athletics Operations	Ticket sales and service fees, complimentary and voided tickets, facilities management, employment contract payments (coaches' bonuses), bowl travel, equipment inventory management, contract administration
5	University Compliance Review: Policies and Procedures	Limited scope review of all senior management areas – Fiscal responsibility, employee compensation and leave reporting, expenditures, fixed assets management, funds handling, key control, information technology, emergency preparedness, vehicle management (state and courtesy car), FERPA, conflicts of interest and commitment



*Thanks for the opportunity to speak  
to you today!*

## **Office of State Inspector General Performance Review**

### **FINANCE AND AUDIT COMMITTEE**

**October 12, 2016**

The Office of State Inspector General (OSIG) was established in April 2011 to conduct independent investigations, performance reviews, and gather information designed to provide objective information to the citizens of the Commonwealth and those charged with its governance. In August 2015, OSIG informed the university regarding its plans to conduct a performance review of Virginia Tech. The university was identified as a high risk agency based on a 2013 statewide risk assessment conducted by Deloitte and Touche LLP for OSIG. The OSIG auditors covered the following areas during their review:

- Science, Technology, Engineering, Mathematics, and Health (STEM-H) programs
- Faculty Start-up packages
- Transfers and Return of Collected Revenue
- Electronic Procurement

The Vice President for Finance and CFO served as point of contact for coordination of the review with multiple personnel on campus.

#### **OSIG Audit Update**

The OSIG auditors conducted interviews with personnel from the Provost Office, Controllers Office, and Procurement to gain an understanding of the university processes related to the above identified areas. Based on these interviews, the auditors established the audit objectives and a detailed review plan. During Spring 2016, the auditors executed the review plan to cover the following specific objectives:

1. Determine whether resource planning is comprehensive enough to ensure new and existing facilities will be available to meet future needs of students in STEM-H degree programs.
2. Determine whether faculty succession planning is sufficient to ensure that Virginia Tech will be able to provide the number of instructors necessary to meet the future needs of students in STEM-H programs.
3. Determine whether faculty start-up packages contain language and provisions to protect the university in the event a faculty member leaves.

4. Determine whether a quantitative or qualitative process is in place to monitor the performance or return on investment of individual faculty start-up packages.
5. Determine whether inefficiencies exist in the transfer of state revenues from Virginia Tech to the Department of the Treasury and the return of such funds back to the university.
  - a. *Through the Restructuring Act, the university has the authority to manage the monies received by it; however, the Code of Virginia requires all state agencies to transfer all collected revenue in the State Treasury. The Commonwealth Accounting Policies and Procedures (CAPP) Manual specifies that State agencies and institutions receiving public funds belonging to or for the use of the Commonwealth or any State agency shall deposit such funds into the State Treasury on the day received or the next banking day. The CAPP Manual allows for an exception to the daily deposit requirement with the approval of the Department of the Treasury*
6. Determine whether the practice of paying eVA fees is effective in retaining vendors who would otherwise not do business with Virginia Tech and determine if continuing this practice makes good business sense for the university.
  - a. *All agencies are required to use the State's e-procurement (eVA) system, with the exception of schools designated as "Tier III," and all are required to pay eVA fees. Chapter 4.10 (§ 23-38.88 et seq. 1) of Title 23 of the Code of Virginia allows schools with Tier III designation to utilize a separate e-procurement system for all procurement operations. However, the Code requires whatever system is used to interface with eVA and have at least 80 percent of transactions flow through eVA, with 75 percent of those going to eVA vendors. Furthermore, the management agreements further impose these schools to process 95 percent of all non-exempt orders within eVA.*
7. Be alert to any symptoms of fraud, waste, and abuse that may appear during the review and follow-up for resolution if necessary.

## **Results of the Audit**

In October 2016, OSIG informed the university about the completion of the review and issued the report (Attachment A). OSIG determined that overall, Virginia Tech's investment in STEM-H programs, faculty start-up packages, and transfer and return of collected revenue

functions were operating efficiently and effectively. The report includes a commendation for the Provost Office for the development of effective quantitative methods for monitoring start-up package outcomes and the university receiving positive “return on investment” for faculty start-up package costs.

OSIG auditors also concluded that the required use of the state procurement system, eVA, does not appear to benefit Virginia Tech; however, they determined that the required use of eVA at all state agencies and universities needs a more comprehensive review beyond the review conducted as part of the Virginia Tech performance review. Hence, OSIG has included a separate review of the eVA system statewide in its fiscal year 2017 audit plan.

OFFICE OF THE STATE INSPECTOR GENERAL  
Report to President Sands

*Virginia Polytechnic Institute  
and State University Performance Review*

October 2016



June W. Jennings, CPA  
State Inspector General  
Report No. 2016-PR-009





*COMMONWEALTH OF VIRGINIA*  
*Office of the State Inspector General*

June W. Jennings  
State Inspector General

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October 25, 2016

Timothy D. Sands, President  
Virginia Polytechnic Institute and State University  
Burruss Hall, Suite 210  
800 Drillfield Drive  
Blacksburg, VA 24061

Dear President Sands:

Under § [2.2-309](#) [A](10) of the *Code of Virginia (Code)*, the Office of the State Inspector General (OSIG) is empowered to conduct performance reviews of state agencies to ensure that state funds are spent as intended and to evaluate the efficiency and effectiveness of programs in accomplishing their purposes. The Virginia Polytechnic Institute and State University (Virginia Tech) review was completed during the period of September 1, 2015, through August 5, 2016.

Virginia Tech was selected for review based on a 2013 statewide risk assessment completed by Deloitte, LLP. The University was ranked as the 7<sup>th</sup> highest risk agency of all executive branch agencies. Areas covered in this review were:

- Science, Technology, Engineering, Mathematics and Health (STEM-H) Program
- Faculty Start-up Packages
- Transfer and Return of Collected Revenues
- Electronic Procurement

The planning phase of the review consisted of conducting interviews with selected members of executive and divisional management. Based on these interviews, the scope was set to cover STEM-H, faculty start-up packages, transfer and return of collected revenues, and electronic procurement. Audit objectives for these areas were set and associated risks were identified. A detailed review plan was then created to accomplish the review objectives. The procedures in the review plan were then executed, and the results were provided in draft form to Virginia Tech management for review.

Overall, OSIG found that Virginia Tech's investment in STEM-H programs, faculty start-up packages, and transfer and return of collected revenue functions were operating efficiently and effectively. The required use of eVA by Virginia Tech for procurement appeared to not benefit the University, however, the required use of eVA at all state agencies and institutions needs additional evaluation beyond that conducted at Virginia Tech. Therefore, OSIG has included a separate broader review of the eVA system statewide in the FY17 audit plan.

OSIG appreciates the assistance provided by your staff during this review.

Sincerely,

June W. Jennings, CPA  
State Inspector General

CC: Paul J. Reagan, Chief of Staff to Governor McAuliffe  
Suzette P. Denslow, Deputy Chief of Staff to Governor McAuliffe  
Dietra Trent, Secretary of Education  
Senator Stephen D. Newman, Chairman of the Education and Health Committee  
Delegate R. Steven Landes, Chairman of the Education Committee  
James Chapman, Virginia Polytechnic Institute and State University Rector

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## Executive Summary

Overall, the Office of the State Inspector General (OSIG) found that Virginia Polytechnic Institute and State University's (Virginia Tech) processes for managing the investment in STEM-H program, administering faculty start-up packages and transferring collected state revenue were operating efficiently and effectively.

OSIG reached this conclusion after:

- Conducting interviews with Virginia Tech's Executive and Senior Management as well as the staff from the Auditor of Public Accounts.
- Reviewing the University's:
  - Enrollment growth projections and resource planning for new and existing facilities.
  - Faculty staffing plans to handle projected enrollment growth.
  - Faculty turnover trends and strategies to improve faculty retention.
  - Processes for monitoring the performance of individual start-up packages and expenditures.
  - Process for the transfer and return of state revenues with the Department of the Treasury.
- Evaluating the University's faculty start-up packages and the process for monitoring the performance or return on investment of the packages.

OSIG commends Virginia Tech's Provost Office on their effective quantitative methods for monitoring start-up package outcomes.

## Purpose and Scope of the Review

The Office of the State Inspector General conducted a performance review of Virginia Polytechnic Institute and State University (Virginia Tech) pursuant to *Code of Virginia* § [2.2-309](#) whereby the State Inspector General shall have power and duty to:

“Conduct performance reviews of state agencies to assess the efficiency, effectiveness, or economy of programs and to ascertain, among other things, that sums appropriated have been or are being expended for the purposes for which the appropriation was made and prepare a report for each performance review detailing any findings or recommendations for improving the efficiency, effectiveness, or economy of state agencies, including recommending changes in the law to the Governor and the General Assembly that are necessary to address such findings.”

This review was not designed to be a comprehensive review of Virginia Tech. Instead, the focus was on certain risk areas identified through a statewide risk assessment of state agencies completed by Deloitte, LLP. The scope and objectives of the review were established through interviews with management. These areas were selected for inclusion based on those interviews:

- STEM-H Program
- Faculty Start-up Packages
- Transfer and Return of Collected Revenues
- Electronic Procurement

The review objectives were to:

1. Determine whether resource planning is comprehensive enough to ensure new and existing facilities will be available to meet future needs of students in STEM-H degree programs.
2. Determine whether faculty succession planning is sufficient to ensure that Virginia Tech will be able to provide the number of instructors necessary to meet the future needs of students in STEM-H programs.
3. Determine whether faculty start-up packages contain language and provisions to protect the University in the event a faculty member leaves.
4. Determine whether a quantitative or qualitative process is in place to monitor the performance or return on investment of individual faculty start-up packages.
5. Determine whether inefficiencies exist in the transfer of state revenues from Virginia Tech to the Department of the Treasury and the return of such funds back to the University.
6. Determine whether the practice of paying eVA fees is effective in retaining vendors who would otherwise not do business with Virginia Tech and determine if continuing this practice makes good business sense for the University.
7. Be alert to any symptoms of fraud, waste, and abuse that may appear during the review and follow-up for resolution if necessary.

## Background

Virginia Polytechnic Institute and State University (Virginia Tech) is a public land-grant university founded in 1872, located in Blacksburg, Virginia. Virginia Tech is an agency of the Commonwealth of Virginia (the Commonwealth) and is governed by the University's Board of Visitors, consisting of 14 members appointed by the Governor of Virginia.

The University offers 240 graduate, undergraduate, and professional degree programs to more than 32,000 students through its eight academic colleges (Agriculture and Life Sciences, Architecture and Urban Studies, Engineering, Liberal Arts and Human Sciences, Natural Resources and Environment, Pamplin College of Business, Science, and the Virginia-Maryland College of Veterinary Medicine).<sup>1</sup> In addition, the Virginia Tech Carilion School of Medicine, a public-private partnership between Virginia Tech and Carilion Clinic, offers a postgraduate medical degree. Virginia Tech consistently ranks among the nation's top universities for undergraduate and graduate programs and features a strong core of science, engineering, agriculture and technology disciplines.

Virginia Tech remains the leading academic research institution in the Commonwealth. According to the National Science Foundation, the University generated \$513 million in research expenditures in fiscal year 2014, ranking 39<sup>th</sup> in the nation.<sup>2</sup> In addition, Virginia Tech ranks 26<sup>th</sup> among the best national public universities and the engineering graduate school is ranked 21<sup>st</sup>, according to the 2016 U.S. News & World Report.<sup>3</sup>

### *Investment in STEM-H Program*

The U.S. Bureau of Labor Statistics (BLS) has projected employment in the Science, Technology, Engineering, Math and Health (STEM-H) fields to grow from 2012 to 2022 by varying percentages including 7.3 percent for Architecture and Engineering Occupations, 18 percent for Computer and Mathematics Occupations, 10.1 percent for Life, Physical, and Social Science Occupations.<sup>4</sup> In these three occupational areas alone, that equates to approximately one million more jobs nationwide in 2022 than in 2012.

The Virginia Higher Education Opportunity Act of 2011, also known as the Top Jobs Act or "TJ21" (§ [23-38.87:10](#)<sup>5</sup> of the *Code of Virginia*), was enacted to help address the employment needs noted by BLS. As directed by § [23-38.87:17](#)<sup>6</sup>, the governing board of each Virginia public

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<sup>1</sup> Virginia Tech website 'About Virginia Tech': <http://www.vt.edu/about.html>

<sup>2</sup> National Research Foundation website: <https://ncesdata.nsf.gov/profiles/site?method=view&face=3754>

<sup>3</sup> U.S. News & World Report "America's Best Graduate Schools 2017" (spring 2016) rankings, website: <http://colleges.usnews.rankingsandreviews.com/best-colleges/virginia-polytechnic-institute-and-state-university-233921/overall-rankings>

<sup>4</sup> <http://www.bls.gov/opub/mlr/2013/article/pdf/occupational-employment-projections-to-2022.pdf>, pg. 7.

<sup>5</sup> Effective October 1, 2016, this Code section changes to § [23.1-301](#)

<sup>6</sup> Effective October 1, 2016, this Code section changes to § [23.1-306](#)

institution of higher education is required to adopt biennially and amend and affirm annually a six-year plan for the institution. Incentives for certain areas, including degree production in STEM-H fields, are identified within § [23-38.87:16](#)<sup>7</sup>. As the Commonwealth's largest producer of STEM-H graduates, Virginia Tech is well positioned to support the state's goals and higher education priorities.<sup>8</sup>

According to the State Council of Higher Education for Virginia (SCHEV), the University produces nearly 25 percent of the Commonwealth's four-year public-institution STEM-H degrees; more than any other institution in Virginia. In 2015, 52.8 percent of Virginia Tech's graduates earned a STEM-H degree.<sup>9</sup> The University's management explained STEM-H disciplines and technology are pervasive at Virginia Tech and there is an emphasis on integrating technology into non-STEM-H programs. The University's Six-Year Plan strategies, most recently updated November 9, 2015, include expanding and enhancing STEM-H degree production in health sciences, neuroscience, creative technologies and computational thinking.<sup>10</sup>

### *Faculty Start-up Packages*

The University is a proponent of offering start-up packages in the recruitment process to attract and retain highly sought-after faculty. The packages may include funds to support the renovation of laboratories, purchase of equipment, hiring of research staff, and training of graduate students, while the research program is being established. In fiscal year 2014/2015, Virginia Tech start-up packages totaled \$28 million. Virginia Tech is projecting to offer start-up packages ranging from \$23.3 million to \$31.3 million per year from 2016-2022.

Start-up packages are typically offered in research-intensive areas, such as engineering. Although start-up packages are highly competitive and can cost millions of dollars, based on interviews with management during the planning phase of the audit, VT would not be able to attract talented faculty without good incentives. Negotiations with candidates for a start-up package, salary, and benefits are very individualized. Generally, start-up package funds are paid over two or three years, although relatively small packages may be paid out over one year.

The University evaluates the overall performance and success of the faculty member receiving the start-up package on an individual level as part of the annual faculty review process and/or tenure review process. While external research funding is one indicator of faculty success, the impact of published scholarly works (articles, books, citations, awards, etc.) is also considered important. The Provost's Office staff also compares faculty research grant awards to total faculty start-up

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<sup>7</sup> Effective October 1, 2016, this Code section changes to § [23.1-305](#)

<sup>8</sup> VT FY15 Financial Report, pg. 2

<sup>9</sup> SCHEV reports, <http://research.schev.edu/apps/info/Reports.Guide-to-the-Degrees-Awarded-Reports.ashx>

<sup>10</sup> Board of Visitors meeting minutes 9/11/15, Approval of 2016-2022 Six-Year Plan, Attachment K  
<http://www.bov.vt.edu/minutes/15-11-9minutes/Index.html>

package amounts, which allows management an opportunity to measure the return on investment (ROI) to the University, from an institutional viewpoint, for start-up package costs.

### *Transfer and Return of Collected Revenues*

Virginia Tech is one of four universities classified as a “Tier III” university within the Commonwealth of Virginia and has been granted latitude in managing its operations and finances. The management agreement between the Commonwealth of Virginia and the University is contained within the 2009 Session *Virginia Acts of Assembly – Chapter 675 and Chapter 685* and states that the University shall have the power and authority to manage all monies received by it.

The transfer of collected revenue to the State Treasury is a Virginia Constitutional requirement (Article X, Section 7 – Collection and disposition of State revenues<sup>11</sup>), although the Virginia Constitution does not specify how often these transfers must be made. The *Commonwealth Accounting Policies and Procedures (CAPP) Manual* (Topic 20205 – Deposits) specifies that State agencies and institutions receiving public funds belonging to or for the use of the Commonwealth or any State agency shall deposit such funds into the State Treasury on the day received or the next banking day. The CAPP Manual allows for an exception to the daily deposit requirement with the approval of the Department of the Treasury.<sup>12</sup>

### *Procurement*

Procurement refers to the process of procuring goods and service to meet planned or actual demand. Procurement encompasses a broad range of issues that can include compliance with the Virginia Public Procurement Act, contract administration, purchasing authorization, processing of requisitions and purchase orders, small purchase charge card (P-card) transactions and Virginia’s electronic procurement system (eVA).

Virginia Tech’s Internal Audit Department performed a Procurement and Accounts Payable Audit in 2014 (no. 14-1150) and a Contract Administration Audit in 2016 (no. 16-1241). In addition, in 2014 the Joint Legislative Audit and Review Commission (JLARC) conducted a review of the development and management of state contracts. Since procurement contracts have had a sufficient level of independent review, OSIG chose not to review contracts and decided to focus on the University’s practice of eVA usage and related fees.

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<sup>11</sup> <http://law.justia.com/constitution/virginia>

<sup>12</sup> [http://www.doa.virginia.gov/Admin\\_Services/CAPP/CAPP\\_Topics/20205.pdf](http://www.doa.virginia.gov/Admin_Services/CAPP/CAPP_Topics/20205.pdf)



## Review Methodology

OSIG conducted this review by:

- Examining the detailed results of Deloitte’s statewide risk assessment
- Conducting interviews to gain insight into the specific concerns from within the risk areas with the:
  - Vice President for Finance and Chief Financial Officer
  - Vice Provost for Resource Management & Institutional Effectiveness
  - Vice Provost for Faculty Affairs
  - Interim Vice President for Research and Innovation
  - Associate Vice President for Research Programs
  - Associate Vice President for Research Planning
  - Assistant Vice President for Budget and Financial Planning
  - Assistant Vice President for Capital Assets and Financial Management
  - Assistant Vice President for Finance and University Controller
  - Assistant Vice President for Finance and Controls
  - Chief of Staff to the Vice President for Finance and Chief Financial Officer
  - Director of Internal Audit
  - Director of Procurement
  - Auditor of Public Accounts (APA) staff (for Virginia Tech)

As a result of the interviews, OSIG identified objectives (see [Purpose and Scope of the Review](#)), and developed detailed review procedures. Work associated with each of the objectives was accomplished primarily through discussions with appropriate departmental managers and reviewing relevant documentation.

The performance review procedures included:

- Reviewing the University’s enrollment growth projections including STEM-H disciplines and resource planning for new and existing facilities.
- Reviewing Virginia Tech’s faculty staffing plans to handle projected enrollment growth, including STEM-H disciplines.
- Reviewing and evaluating faculty turnover trends and the University’s strategy to improve faculty retention.
- Reviewing Virginia Tech’s process for the transfer and return of state revenues with the Department of the Treasury.
- Evaluating the University’s processes for monitoring the performance of individual start-up packages and expenditures.
- Reviewing the University’s use of the state’s electronic procurement system (eVA) and related fees.
- Evaluating whether preventive and detective controls were in place to identify symptoms of fraud, waste, and abuse and to follow-up for resolution, as needed.

## Review Results

Overall, OSIG found that Virginia Tech's investment in STEM-H programs, faculty start-up packages, and transfer and return of collected revenue functions were operating efficiently and effectively. No conclusion is made regarding Virginia Tech's required use of and related fees paid for the State's electronic procurement system (eVA). The required use of eVA by Virginia Tech appeared to not benefit the University, however, the required use of eVA at all state agencies and institutions needs additional evaluation beyond that conducted at Virginia Tech. Therefore, a separate broader review of the eVA system statewide has been included by OSIG in the FY17 audit plan.

### *Investment in STEM-H Program*

OSIG obtained an understanding of Virginia Tech's processes for evaluating enrollment growth, space utilization, and assessing the need for additional faculty from our interviews with management.

OSIG reviewed Virginia Tech's student growth projections by discipline. Targeted enrollment for 2015-2016 was expanded by 500 students which resulted in an actual growth of 800 freshmen.<sup>13</sup> A new building under construction at the time of this review is an example of how Virginia Tech was addressing the need for additional classrooms and laboratory space. The building will provide classrooms that can be configured to support group work, and accommodate new instructional technologies while providing the opportunity for Virginia Tech to determine and complete needed renovations of current facilities. In addition, some high-volume introductory laboratories will move to the new facility while needed renovations are determined and completed for current laboratories.

OSIG also reviewed reports and surveys in use by University management which assist in establishing plans for capital projects and building renovations. OSIG found that Virginia Tech is assessing current and future needs including utilization and condition assessments of classroom and laboratory space. The University is also reviewing student feedback from classroom environment surveys, as well as requests from academic departments.

Virginia Tech is planning for a sufficient number of future instructors. Based on review of faculty projections, there is a correlation between the number of students expected and the number of instructors needed in the future. For example, the University maintains a metrics report providing trends on student needs for specific programs and the faculty required to address those needs. These trends then are used to develop strategic goals for matching the University's initiatives such

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<sup>13</sup> Virginia Tech Board of Visitors meeting minutes 3/20/16  
[http://www.bov.vt.edu/minutes/16-03-21minutes/Information\\_Session\\_03-21-16.pdf](http://www.bov.vt.edu/minutes/16-03-21minutes/Information_Session_03-21-16.pdf) as accessed 9/15/16

as maintaining a high number of STEM-H programs. A low faculty turnover and high retention rate assist the University in meeting these goals.

As mentioned previously, over half of the Virginia Tech graduates in 2015 earned a STEM-H degree. OSIG concluded that Virginia Tech's process for assessing the need for faculty and infrastructure to accommodate the growing demand for STEM-H degrees is functioning effectively.

### ***Faculty Start-up Packages***

OSIG reviewed the Provost Office's established method of tracking faculty hires and their respective start-up packages, and the process for assessing the performance of start-up packages. At an institutional level, Virginia Tech compares inputs, such as start-up package funding, to outputs, such as external research awards and National Science Foundation (NSF) rankings. Management also evaluates individual start-up package performance through comparison with the faculty member's research grants as well as scholarly works, such as published journal articles, awards, books, and conference proceedings. Provost's Office records indicated that 48 faculty members, who had individual start-up packages greater than \$25,000, were hired in 2009 and 2010 with start-up packages valued at a total of \$10.9 million, while their research grant awards aggregated to \$62.3 million.

The review included evaluating the logic and variables used in producing the Provost Office's reports for tracking start-up packages and for projecting future start-up package costs. OSIG found Virginia Tech's process for authorizing the Colleges' hiring plans to be effective for controlling future faculty start-up package costs and limiting them to available revenue sources.

OSIG also reviewed start-up package expenditures for faculty members that left the University before the end of their contract term and verified that no expenditures were initiated after the employee's departure date.

### **COMMENDATION NO. 1 – EFFECTIVE MONITORING OF OUTCOMES**

The Provost's Office has developed effective quantitative methods for monitoring start-up package outcomes and the University is receiving positive "return on investment" for faculty start-up package costs.

### ***Transfer and Return of Collected Revenues***

Through interviews with the University Controller, the Associate Controller and the General Accounting Manager, OSIG determined Virginia Tech's process for transferring state revenue collections to the State Treasury. OSIG reviewed a report of all daily wire transfers processed in fiscal year 2015. An analysis of the data showed that Virginia Tech processed 248 daily wire

transfers. The current procedures collectively require about 1.5 to 2 hours of labor each day and the University pays a \$2.50 fee for each wire transfer.

OSIG found similar procedures in a recent performance review of the University of Virginia (UVA). As a result, in December 2015, UVA’s Treasurer initiated a discussion with representatives from Virginia Tech, Virginia Commonwealth University (VCU), the Department of Accounts (DOA), and the Department of the Treasury (Treasury). The parties tentatively agreed that weekly revenue transfers would be an acceptable alternative to the daily process. During the examination of this process, Virginia Tech indicated that they will pursue a weekly revenue transfer process with the Department of Accounts and Treasury staff in conjunction with the other Tier III schools to finalize procedures for the weekly transfer process in an effort to reduce labor time and banking fees associated with depositing revenues to the State Treasury. OSIG encourages Virginia Tech to follow through with their plans to pursue a weekly revenue transfer process.

### ***Electronic Procurement***

All agencies are required to use the State’s e-procurement (eVA) system, with the exception of schools designated as “Tier III,” and all are required to pay eVA fees. Chapter 4.10 (§ [23-38.88](#) et seq.<sup>14</sup>) of Title 23 of the *Code of Virginia* allows schools with Tier III designation to utilize a separate e-procurement system for all procurement operations. However, the *Code* requires whatever system is used to interface with eVA and have at least 80 percent of transactions flow through eVA, with 75 percent of those going to eVA vendors. Furthermore, the management agreements further impose these schools to process 95 percent of all non-exempt orders within eVA.

Virginia Tech is designated as a “Tier III” university. Virginia Tech uses a SciQuest software application product as their electronic procurement system, known as “HokieMart.” SciQuest is a leading firm in procurement software for higher education institutions.<sup>15</sup> Virginia Tech management confirmed that eVA is used primarily for transparency and *Code* mandated purposes, but they do use it additionally for public solicitations.

OSIG conducted a review of the Department of General Services (DGS) while the review of Virginia Tech was progressing. The DGS review included Tier III universities’ use of eVA and fees paid for the usage. The following is Virginia Tech’s transaction fees over the past three fiscal years, as well as the amount paid by Virginia Tech to SciQuest for support of their own HokieMart procurement system:

<b>VIRGINIA TECH</b>			
<b><i>Year</i></b>	<b><i>eVA Fees</i></b>	<b><i>SciQuest Fees</i></b>	<b><i>Total Fees</i></b>
2013	\$400,754	\$227,708	\$628,462

<sup>14</sup> Effective October 1, 2016, this Code section changes to [§ 23.1-1002](#)

<sup>15</sup> <https://www.universitybusiness.com/article/new-supply-chain>, accessed September 19, 2016

2014	\$369,127	\$227,708	\$596,835
2015	\$583,409	\$227,708	\$811,117
<b>Total</b>	<b>\$1,353,290</b>	<b>\$683,124</b>	<b>\$2,036,414</b>

Costs incurred annually for SciQuest usage relate to maintenance fees along with any voluntary enhancements (such as implementation of a new module) Virginia Tech chooses to purchase. Although eVA is primarily used for transparency in reporting, Virginia Tech pays significantly more towards eVA than they pay towards their own procurement system.

OSIG concludes that the use of eVA for electronic procurement is a broader issue than just the Tier III institutions and has included an evaluation of eVA from a broader perspective in OSIG's FY17 audit plan rather than making recommendations impacting only Virginia Tech.

### ***Fraud, Waste and Abuse***

As part of the performance review, OSIG considered the risk of fraud, waste and abuse. For the focus areas of this project, OSIG considered the risk of fraud to be low. No instances of possible fraud, waste, or abuse came to our attention during the review.

# **University Support for Student Financial Aid**

## **FINANCE AND AUDIT COMMITTEE**

**September 30, 2016**

Consistent with prior years, the university is providing the Finance and Audit Committee of the Board of Visitors with an update on the university's Student Financial Aid program. This annual report provides an overview of the types of student financial assistance programs available at the university, sources of funding for programs, and a review of the institutional undergraduate aid programs that can be controlled or influenced by the university.

### **Funding Environment**

Virginia Tech is experiencing an ongoing shift in the types of resources available to support its instructional programs. These changes include periodic increases in tuition and required fees as driven by a combination of increasing costs, the requirement to maintain the quality and integrity of the instructional programs, enrollment growth to support additional Virginia students, and the inability of the state to maintain its historic level of financial support.

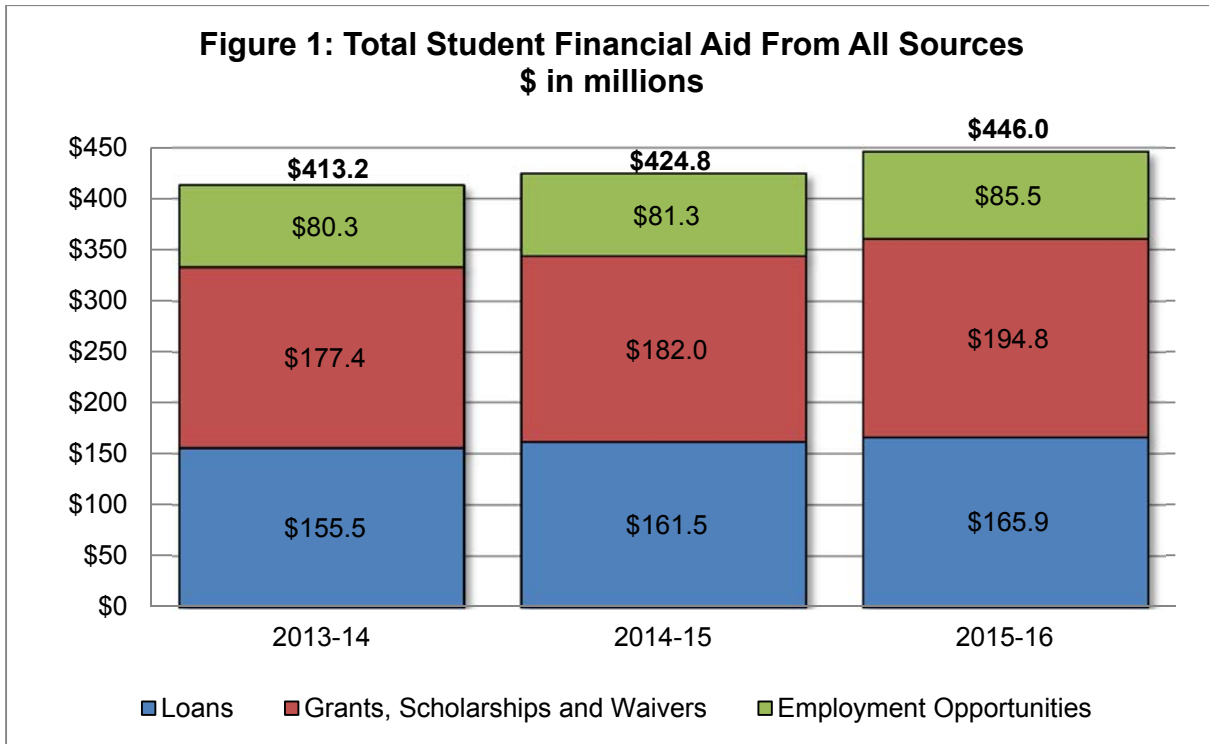
The state-funded share of support per student is impacted by limited General Fund resources at the state level, mandatory cost increases such as health care benefits, enrollment growth of Virginia resident students, and inflation; as a result, increases in tuition and fees are increasingly relied upon to support the university's instructional activities. In this environment, the role of student financial assistance of all types has become a more critical element of financial planning in the university's efforts to ensure access and affordability. Financial aid programs are critical to support those goals, as well as promoting the recruitment, retention, and graduation of students. The university's financial aid efforts seek to ensure that qualified students can access a Virginia Tech education and help to promote a diverse and inclusive community in support of the university's goals and objectives.

Historically, the university has strived to manage increases in tuition and fees at a reasonable level to enhance access and affordability; this strategy was predicated on a certain level of state support. However, the funding mix of higher education continues to evolve. As the state share of a student's cost has fallen significantly over time, the student's share of their cost of education has grown. Understanding this shift, the university has proactively focused its efforts to increase support for student financial aid. These efforts are specifically designed to ensure access and affordability and meet the goals of the university as described in its Management Agreement with the Commonwealth.

### **Types of Student Financial Aid**

The university facilitates a multifaceted scholarship and financial aid program that provides assistance to undergraduate students through grants and scholarships, employment opportunities, loans, and payment strategies. Graduate students are supported through graduate assistantships, which provide tuition remission and a stipend in exchange for university service. Fund sources for this assistance are varied as are their accompanying

eligibility protocols. For fiscal year 2015-16, total aid reached \$446.0 million, as seen in Figure 1 below.



Financial assistance to students is provided in the four main categories of grants and scholarships, employment, loans, and payment options:

1. **Grants and Scholarships** provide aid based on academic or extracurricular achievement, or financial need, and require no exchange of service. Some of these are need-based, while others are merit-based. No repayment is expected.

*Need-based awards* are offered to students who demonstrate financial need as determined by federal and institutional standards. Such standards involve the computation of the cost of attendance including estimated books and supplies, transportation, personal expenses, and room and board whether on or off campus, in addition to tuition and required fees. From this total cost of attendance the university subtracts the Expected Family Contribution (standardized through the Free Application for Federal Student Aid, the FAFSA), and any outside aid the student has obtained from sources other than the university to determine the student’s financial need.

*Non-need-based awards* may be merit-based and offered to students who demonstrate exceptional aptitude and academic and/or extracurricular achievement.

2. **Employment** includes wage employment, student work-study opportunities at the undergraduate level, and graduate assistantships at the graduate level. In 2015-16, 33 percent (10,934) of Virginia Tech students participated in an employment opportunity.

*Federal Work-Study* – provides eligible students a financial aid allotment and a wage employment position. This program is subsidized by the federal government and is supported in part by the university. Work-study participants are employed both on and off-campus; gaining valuable work experience along with financial assistance. Award amounts, generally between \$1,500 and \$2,500 are based on a student's Free Application for Federal Student Aid (FAFSA) filing. In 2015-16, 811 students participated in FWS programs; 791 at the undergraduate level and 20 at the graduate/professional level.

*Wage employment opportunities* - provide university employment to students based upon individual qualifications subject to departmental needs and resources. The university employed 7,331 students in wage positions during 2015-16; 6,239 at the undergraduate level and 1,092 at the graduate/professional level.

*Assistantships* - offer tuition remission and a stipend in return for the student's (typically graduate-level) effort through research, service, or teaching. This funding supports both the graduate student and the university's programs. The university employed 3,719 individual graduate students, or 3,232 full-time equivalent students, as graduate assistants in administrative, teaching, and research positions in 2015-16. This represents 72 percent of the full-time graduate student population.

3. **Loans** are offered through institutional, federal, and private lenders and provide financial assistance. These loans have repayment requirements. Loans may be subsidized or unsubsidized.

*Subsidized loans* - are generally from the federal government, carry a lower interest rate, and do not accrue interest or require payment during qualifying enrollment and deferment periods.

*Unsubsidized loans* - generally accrue higher, market-based interest rates from the date the loan is disbursed, and may not require repayment during qualifying enrollment and deferment periods.

4. **Payment Options** include prepaid tuition plans offered by the Commonwealth of Virginia (such as tax sheltered savings plans) and the Budget Tuition Plan operated by the university. The Budget Tuition Plan is an installment payment plan which provides students and families the opportunity to spread the cost of tuition and fees over the course of the semester.

The university is involved in the administration and distribution of each of these types of financial aid. Many programs are administered outside of the university, and students arrive with financial aid arrangements (which are in general termed "outside aid" in this report) that the university facilitates on their behalf. Other programs are developed within the institution.



## Sources of Funding for Grants and Scholarships

A diverse array of resources supports grants and scholarships, including federal, state, institutional, and outside aid, as seen below in Table 1.

**Table 1: Grants, Scholarships, & Waivers**  
(\$ in millions)

	2013-14	2014-15	2015-16
<u>Undergraduate</u>			
<b>Federal</b>	\$ 18.0	\$ 18.0	\$ 18.3
<b>State</b>	15.4	15.5	15.6
<b>Institutional</b>			
Unfunded Scholarships	13.8	14.0	15.1
Tuition/Fee Funded Aid	0.0	0.0	1.2
Internal Resources	0.9	1.1	0.4
Other Undergraduate <sup>(1)</sup>	6.0	4.9	5.7
Private (Foundation)	20.4	21.1	22.9
<i>Subtotal Institutional</i>	41.1	41.1	45.3
<b>Outside</b>	25.1	25.9	28.2
<i>Subtotal Undergraduate</i>	99.6	100.5	107.4
<u>Graduate</u>			
<b>Federal</b>	0.2	0.0	0.0
<b>State</b>	4.5	4.5	4.5
<b>Institutional</b>			
Graduate Tuition Remission	60.1	64.0	68.8
Tuition/Fee Funded Aid	0.0	0.0	0.2
Other Graduate <sup>(2)</sup>	3.6	3.7	3.7
Private (Foundation)	2.8	2.6	2.7
<i>Subtotal Institutional</i>	66.5	70.3	75.4
<b>Outside</b>	6.6	6.7	7.5
<i>Subtotal Graduate</i>	77.8	81.5	87.4
<i>Total Grants, Scholarships, &amp; Waivers</i>	\$ 177.4	\$ 182.0	\$ 194.8

(1) Other Undergraduate includes external grants and contracts, waivers codified in the Code of Virginia, and educational benefits for employees.

(2) Other Graduate includes waivers codified in the Code of Virginia and educational benefits for employees, and internal resources used to support graduate students.

Federal Support comes from the federal government and is provided through Pell Grants and Federal Supplemental Educational Opportunity (FSEOG) support. These programs are administered by, and flow to the student through, the university. The appropriations for these programs are often congressionally approved and, in the case of Pell Grants, follow the student to their university.

State Support is provided by the Commonwealth from the state General Fund in several ways. The bulk of the Commonwealth's appropriation is directed to the university in support of Virginia resident undergraduate need-based scholarships. Funding is also appropriated to support graduate student assistantships. Additionally, the Commonwealth directs a small portion of funding to the university to fund students in the Soil Sciences and students participating in the Multicultural Affairs and Opportunities Program. Other state funding may flow to the university on behalf of students, and is not under the university's control.

Institutional Support is the area of financial aid that the university can impact directly, providing financial assistance in the form of scholarships and grants at the undergraduate level and assistantships at the graduate level. Institutional support comes through six main categories: unfunded scholarships, Tuition & Fee Revenue Used for Financial Aid, internal resources, codified waivers, graduate tuition remission, and private funding. In 2015-16, institutional support provided \$45.3 million to 10,235 undergraduate students, an average of \$4,426 per student.

*Unfunded Scholarships:* Section §23-1 of the Code of Virginia authorizes institutions of higher education to create need-based scholarships through the remission of tuition and fees up to certain limits at both the student and institutional level. These programs are supported by the tuition budget and are reflected in the net tuition revenue collected by the university.

*Tuition & Fee Revenue Used for Financial Aid:* The 2014 General Assembly session added language in Section §4-5.01 b.1.a of the Appropriation Act that authorizes institutions of higher education to create nongeneral fund appropriations for student financial assistance, as follows: (i) funds derived from in-state student tuition will not subsidize out-of-state students, (ii) students receiving these funds must be making satisfactory academic progress, (iii) awards made to students should be based primarily on financial need, and (iv) institutions should make larger grant and scholarship awards to students taking the number of credit hours necessary to complete a degree in a timely manner. These programs are supported by the tuition budget and are reflected in the net tuition revenue collected by the university.

*Internal Resources:* Some institutional support is available from specific resources. Given the public nature of much of the university's resources, the university is limited in its ability to generate resources for flexible scholarship support. Examples of this type of support are revenue from Virginia Tech license plate sales and net revenues from licensing and trademark activities.

*Codified Waivers:* While the university is generally unable to waive student charges, codified waivers are specific programs that are enacted in the Code of Virginia that authorize the waiver of charges to support specific groups targeted by the Commonwealth. These groups include:

- Dependents and spouses of military personnel such as members of the United States Armed Forces or Virginia National Guard who were killed or severely disabled in action,
- Surviving spouses and children of Virginia public safety personnel such as law-enforcement officers, campus police officers, and firefighters killed in the line of duty,
- Senior citizens with income less than \$23,850 per year, as long as tuition paying students are not displaced.

Because the costs of these programs are managed by the institution, these programs are considered institutional support. The university also supports graduate students on assistantship through the waiver of the nonresident differential (the difference in the tuition rate between resident and nonresident graduate students) as authorized by the Appropriation Act for significantly employed graduate students.

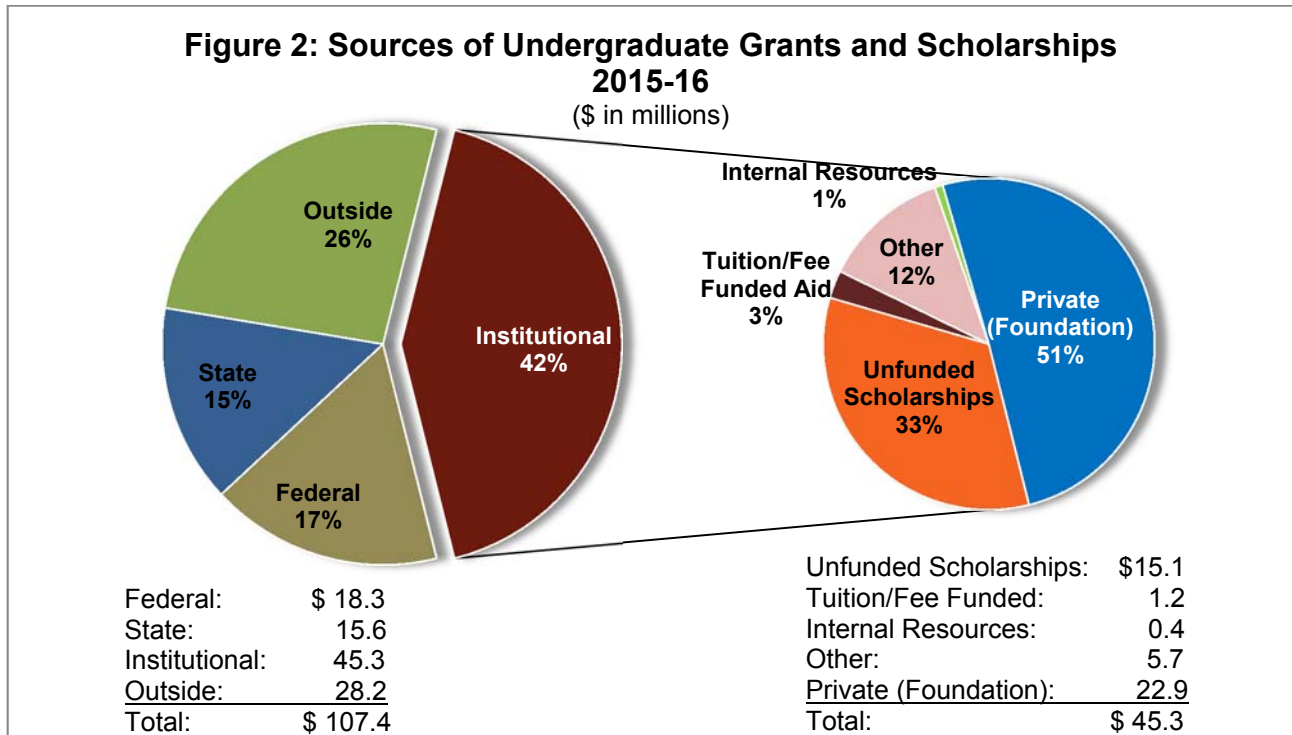
*Graduate Tuition Remission:* The most common source of support for graduate students is the graduate assistantship. An assistantship is comprised of a stipend, health insurance, and graduate tuition remission. Assistantships support teaching, research, or other service within the university. The university funds a portion of the graduate tuition remission program, as do grants and contracts tied to specific externally sponsored activities, primarily research.

*Private Funding:* Additional support is available through the Virginia Tech Foundation. Private funds come through philanthropy in annual fund or endowment. Annual support is available to be utilized on a one-time basis. Endowments are held to create ongoing stream of earning for a perpetual benefit.

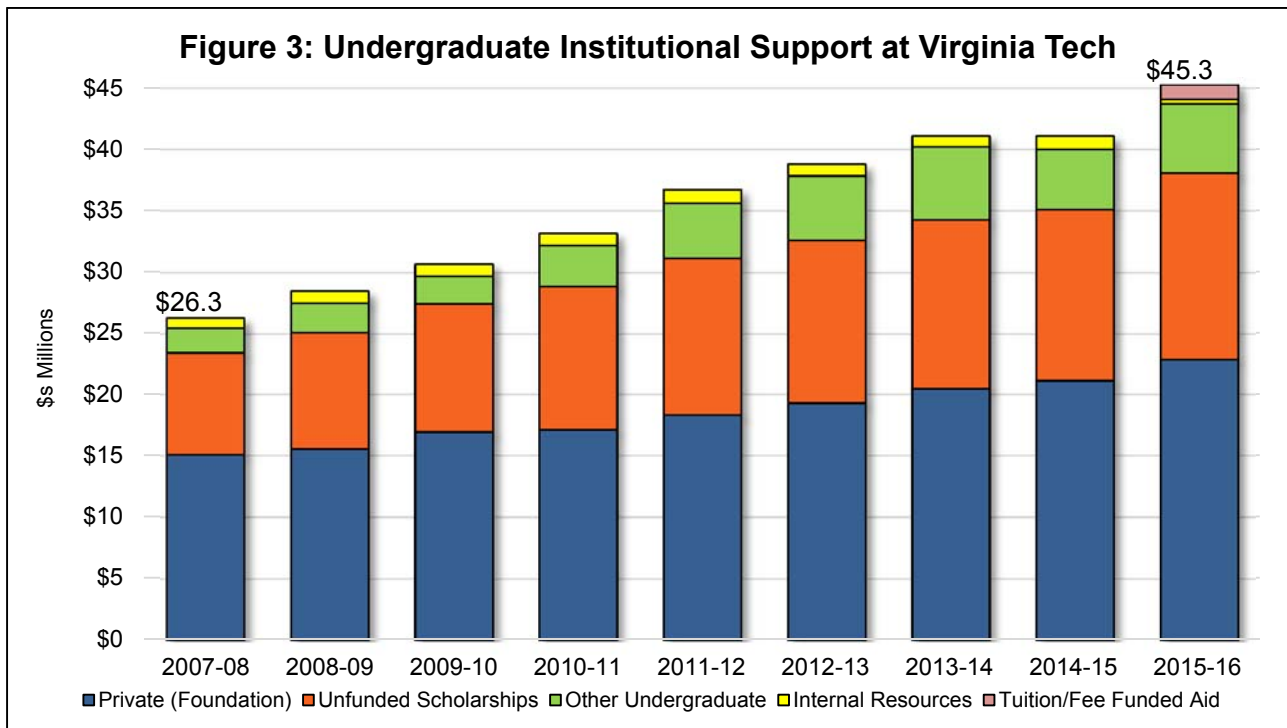
Outside Aid is aid which normally comes with a student from private external parties. This could include private organizations, nonprofit organizations, businesses, governmental entities, international organizations, and other special-interest groups. The university does not control this fund source but works to facilitate and coordinate the delivery of such support. Often these awards are tied to academic progress eligibility which the university may monitor on behalf of the awarding entity.

## Undergraduate Scholarships

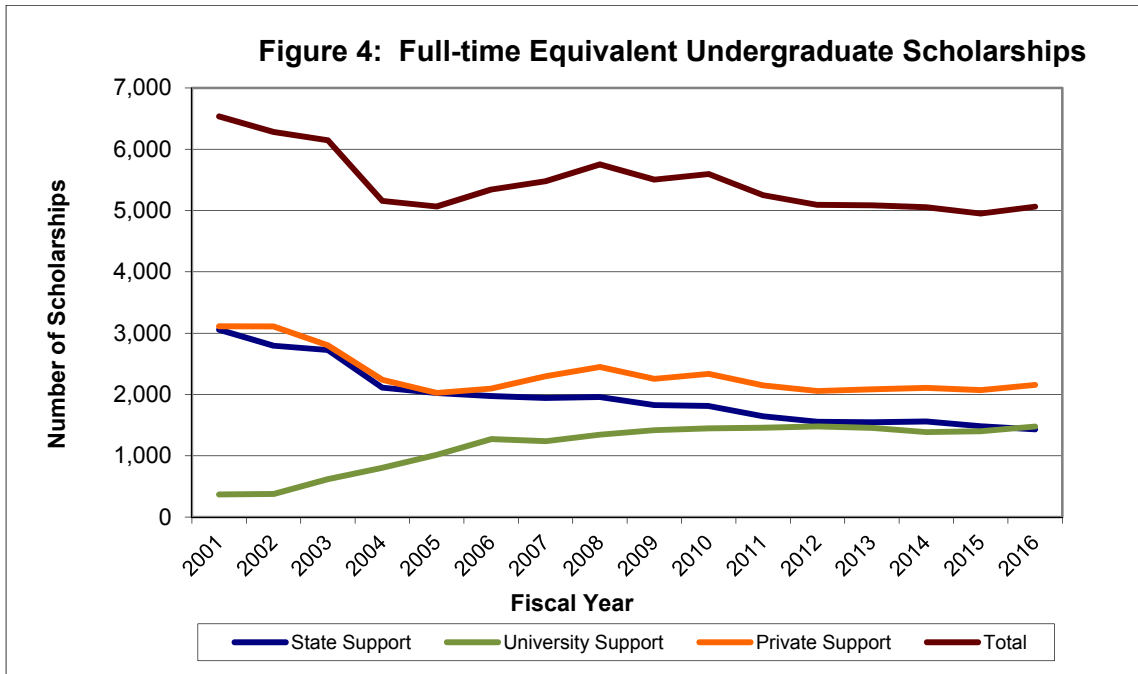
Of the sources of undergraduate scholarships and grants, 42 percent are derived from institutional sources, as seen in Figure 2.



Institutional resources to support undergraduate student financial aid awards have increased over time, as seen in Figure 3.



Though resources have increased over time, tuition increases often have outpaced increases in state and private sources, and in most years resulted in a declining number of theoretical tuition and E&G fee scholarships that could be supported by these resources. In 2016, the university was able to make measured progress in the total number of Full-Time Equivalent number of awards for undergraduates. Moving forward, the university intends to continue to exert additional emphasis on raising additional funds to further increase the university’s capacity to help with student affordability. Figure 4 displays the trend of this scholarship analysis from these sources.



### Uses of Funds

The university leverages institutional support to advance access and affordability and has also created several innovative, very successful programs. Two major undergraduate Grant and Scholarship programs are:

Funds for the Future –This is the university’s largest undergraduate financial aid program, designed to assist returning students with financial need by mitigating all or a portion of increases in tuition and required fees based on level of family income. This program is specifically designed to provide support to both low and middle-income undergraduates. Depending upon the adjusted gross income of the student’s family, the student can be fully protected from tuition and required fee increases in each year the student returns to the university. Table 2 shows the number of resident and nonresident students receiving this aid in 2015-16.

**Table 2: 2015-16 Funds for the Future Award Recipients**

Family Income (AGI)	Number of Virginia Undergraduates Receiving Award	Number of Nonresident Undergraduates Receiving Award
\$0 - \$49,999	1,518	281
\$50,000 - \$74,999	731	166
\$75,000 - \$99,999	709	181
<b>Total</b>	<b>2,958</b>	<b>628</b>

Funds for the Future Program Enhancement for 2016-17

For 2016-17, the university has enhanced the tuition protection for many students by covering 100 percent of tuition increases for students with family income of up to \$74,999, covering 50 percent of tuition increases for students with family income between \$75,000 and \$87,499, and covering 25 percent of tuition increases for students with family income between \$87,500 and \$99,999. Table 3 displays the income categories and resulting percentage of tuition and required fee increases that returning students will be protected against in 2016-17. The program is available to both resident and nonresident undergraduate students. The Funds for the Future program is integral to the mitigation of tuition increases and provides maximum predictability of tuition and fee costs to students.

**Table 3: Funds for the Future Protection Levels**

2016-17 FFF Program Parameters			
Family Income (AGI)	Undergraduate Tuition & Fee Increase Protection *	Example Impact of FFF Protection for Undergraduate Student	
		Total Tuition & E&G Fee Increase	Net Impact of Tuition & Fee Increase
\$0 - \$74,999	100%	2.9%	0%
\$75,000 - \$87,499	50%	2.9%	1.5%
\$87,500 - \$99,999	25%	2.9%	2.2%

\* Tuition protection is the same for in-state and out-of-state students.

VT Grant – In addition to protecting students with financial need from tuition and required fee increases, the university has also been methodically working to expand its total aid program, with the goal of reducing unmet need. Additional funds have been allocated to this program annually with the goal of reducing unmet need at a measured pace over time.

Other programs that have been designed to offset the costs of attendance, achieve enrollment goals, and recognize academically talented students include:

- Presidential Scholarship Initiative to assist low-income and first-generation Virginia students with significant financial need,
- VT Scholars award to recruit academically talented students and advance university first generation enrollment goals,
- Emerging Leaders Scholarship for participants in the Corps of Cadets,

- Presidential Campus Enrichment Grants and Alumni Presidential Scholar Program that serve both students with need and students who demonstrate merit to achieve university enrollment goals,
- Yellow Ribbon program for military veterans and dependents (university support for federal matching program),
- Scholarships to defray a portion of a student’s costs to study at the Steger Center for International Scholarship, and
- Scholarship support to help offset the higher costs of study abroad programs.

These programs help address the commitment to access and affordability that the university undertook as part of the Restructured Higher Education Financial and Administrative Operations Act initiative. Further, these programs have been well received by students, families, and the Commonwealth and help advance strategic goals.

### Trends in Student Indebtedness

#### Loans

The university continues to monitor students’ borrowing behavior. Table 4 below displays the average borrower debt of the graduation class at Virginia Tech and nationally for the past 3 years, as well as the percentage of each class who carried student loan debt upon graduation. According to the Institute for College Access and Success, 69 percent of 2014 graduates of public and nonprofit four-year colleges had student debt averaging of \$28,950 per borrower. At Virginia Tech, only 53 percent of the class of 2014 graduated with any debt. Of those who did graduate with debt, the average was \$27,865, or 3.7 percent below the national average. Though the use of student loans remains a personal decision, the university provides students and parents with information and counseling to understand the benefits and responsibilities of student loan resources. Moving forward, the university envisions enhanced aid and loan counseling programs in an effort to help reduce student debt.

**Table 4: Loan Statistics of Virginia Tech Graduates**

Class of:		2012	2013	2014	2015	2016
VT	\$	\$25,672	\$26,807	\$27,865	\$28,873	\$28,884
	%	54%	55%	53%	53%	51%
National Average	\$	\$27,850	\$28,400	\$28,950	Not Yet Available	Not Yet Available
	%	68%	69%	69%	Not Yet Available	Not Yet Available

#### Default Rate

Virginia Tech’s 2013 cohort default rate for the Federal Direct Loan (FDL) and Federal Family Education Loan (FFEL) programs was 1.6 percent, compared with a 2.8 percent average default rate among the university’s peer group. While default rates are linked to the national economy, Virginia Tech has consistently had a default rate below the national average, as seen in Table 5 below.

**Table 5: Cohort Default Statistics of Virginia Tech Borrowers**

<b>Cohort Default Rate</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
<b>VT</b>	2.6%	2.1%	1.6%
<b>National Peer Average</b>	4.2%	3.1%	2.8%

Net Price

When all available financial aid resources are applied to the overall Cost of Attendance (including tuition and fees, room and board, books, travel, and other costs), a “Net Price” can be derived to represent the remaining cost to the student. Due to various discounting strategies across institutions, the Net Price can be a helpful comparison point of the choice faced by students and their families. The National Center for Educational Statistics (NCES) compiles Net Price data across five student income categories. Table 6 below compares the university’s net price with national and state peers for a first year full-time Virginia undergraduate (or resident student within another state). This analysis finds that while the university remains competitive in terms of the average Cost of Attendance (sticker price), the university has an opportunity to enhance the net price competitiveness for low and middle-income students.

**Table 6: Comparison of Net Price for Undergraduate Residents**

	Cost of Attendance (Sticker Price)	Average Net Price by Income (2014-15 data)				
		\$0-\$30,000	\$30,001-\$48,000	\$48,001-\$75,000	\$75,001-\$110,000	\$110,001+
Virginia Tech	\$25,837	\$12,735	\$15,069	\$18,819	\$22,441	\$24,523
National Peer Average	\$29,558	\$9,833	\$11,651	\$15,923	\$21,630	\$25,911
<b>Advantage/(Disadvantage)</b>	<b>\$3,721</b>	<b>\$(2,902)</b>	<b>\$(3,418)</b>	<b>\$(2,896)</b>	<b>\$(811)</b>	<b>\$1,388</b>
Virginia Tech	\$25,837	\$12,735	\$15,069	\$18,819	\$22,441	\$24,523
Select VA Doctorals	\$29,093	\$7,084	\$8,278	\$13,738	\$21,363	\$26,935
<b>Advantage/(Disadvantage)</b>	<b>\$3,256</b>	<b>\$(5,651)</b>	<b>\$(6,791)</b>	<b>\$(5,081)</b>	<b>\$(1,079)</b>	<b>\$2,412</b>

Unmet Need

A student’s need is determined using the federal Free Application for Federal Student Aid (FAFSA). This calculation begins with the cost of attendance (tuition, fees, room, board, books and travel), subtracts the expected family contribution (EFC) along with any aid provided (including loans), and the remaining amount is considered “unmet need”. While external factors such as state budget reductions and student family income significantly effect this calculation, reducing the percentage of unmet need over time is a goal of the university’s student financial aid program. Table 7 below displays the unmet need of resident and nonresident undergraduates over time.



**Table 7: Trend of Unmet Need**

	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>	<b>2015-16</b>
Virginia Undergraduate	\$4,457	\$5,668	\$5,814	\$5,299	\$5,480
% of Average Unmet Need	31.4%	36.8%	36.7%	33.2%	34.1%
Nonresident Undergraduate	\$8,380	\$10,273	\$10,541	\$9,783	\$10,855
% of Average Unmet Need	40.0%	45.9%	45.8%	41.8%	44.4%

### **Current Events**

The university is currently developing strategies to raise significant additional funding for scholarships and financial aid, specifically to reduce the net price for Virginia undergraduates in the lowest three income quintiles. Enhancing the resources available to these students through the university's student financial aid program is an important goal to advance Virginia Tech.

The commonwealth is in the process of reviewing the allocation of General Fund resources across the statewide system of public institutions. The university is following this discussion closely to understand what impacts it may have on the university's General Fund allocation. As of the writing of this report, there is no new information available. However, the likelihood of the commonwealth significantly increasing General Fund support for financial aid for Virginia Tech is low. The university will need to continue to explore all possible opportunities to enhance access and affordability for Virginia undergraduates through increased institutional sources, with an emphasis on private fundraising.

In addition to supporting resident student financial need, the university's scholarship program is integral to the achievement of enrollment targets, particularly of nonresident undergraduates. This enrollment provides resources to support resident students and university strategic initiatives. Aid to attract and retain students in several targeted disciplines will be a focus of incremental resources.

The university will continue to work to assist students and families with managing the cost of education in the future. For 2015-16, 10,484 full-time Virginia Tech undergraduate students (42 percent of the university's undergraduate full-time population) were determined to have financial need. For 2016-17, the university worked to moderate tuition increases while increasing the allocation of unfunded scholarship support for undergraduates. This plan ties into the university's commitment in its Management Agreement to increase support for need-based student financial aid to help ensure access and affordability.

The university has increased its unfunded scholarships commitment each year since expanding the program in 2001-02. While the university has been leveraging the unfunded scholarship authority to expand need-based aid, the use of unfunded scholarships has legal and practical limits. As a result, it will be important for the university to work to expand funding from other sources in the future, especially by increasing private fundraising, and working to expand new innovative sources.

The university employs a wide variety of programs and fund sources to support student access to higher education in concert with the commonwealth. Moving forward, the university believes that significant progress can be made in the area of access and affordability.



## **University Support for Student Financial Aid**

November 6, 2016

M. Dwight Shelton, Jr., VP for Finance and  
Chief Financial Officer

# Forms of Student Financial Aid

## Grants and Scholarships

- Need-based
- Merit-based

## Employment

- Federal Work Study
- General Wage
- Graduate Assistantship

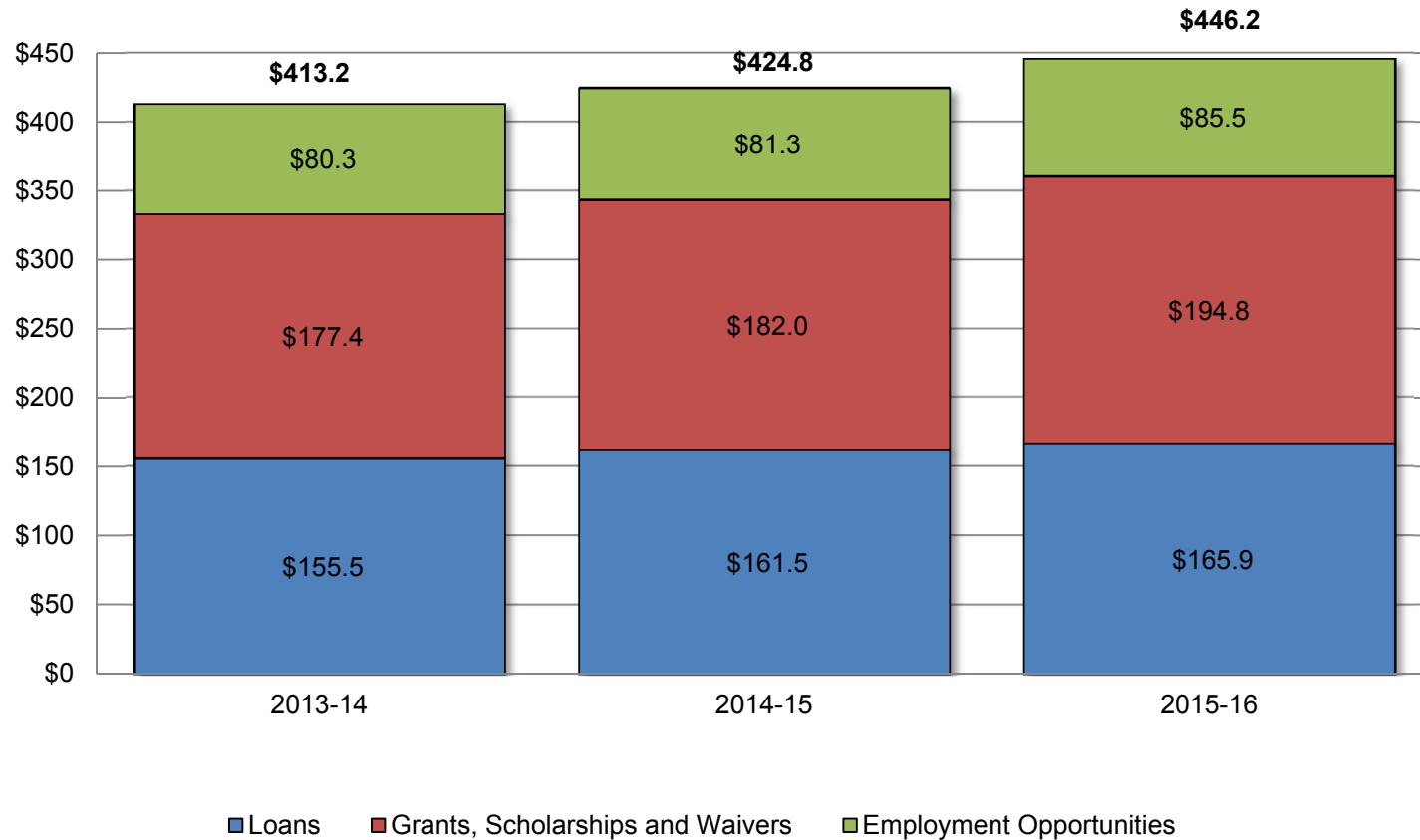
## Loans

- Subsidized
- Unsubsidized

## Payment Options

# Student Financial Aid at Virginia Tech

**Total Student Financial Aid From All Sources**  
\$ in millions



\*Figure 1 totals are restated from prior presentations to remove prepaid awards from the scholarship totals

# Grants, Scholarships, & Waivers

## Sources of Funding:

- **Federal**
- **State**
- **Institutional**
  - Unfunded Scholarships
  - Tuition and Fee Revenue Used for Financial Aid
  - Internal Resources
  - Codified Waivers
  - Tuition Remission
- **Private**
  - Foundation
  - Outside funds

# Undergraduate Grants and Scholarships

(\$ in millions)

	2013-14	2014-15	2015-16
<u>Undergraduate</u>			
<b>Federal</b>	\$ 18.0	\$ 18.0	\$ 18.3
<b>State</b>	15.4	15.5	15.6
<b>Institutional</b>			
Unfunded Scholarships	13.8	14.0	15.1
Tuition/Fee Funded Aid	0.0	0.0	1.2
Internal Resources	0.9	1.1	0.4
Other Undergraduate <sup>(1)</sup>	6.0	4.9	5.7
Private (Foundation)	20.4	21.1	22.9
<i>Subtotal Institutional</i>	41.1	41.1	45.3
<b>Outside</b>	25.1	25.9	28.2
<i>Subtotal Undergraduate</i>	99.6	100.5	107.4

(1) Other Undergraduate includes external grants and contracts, waivers codified in the Code of Virginia, and educational benefits for employees.

# Graduate Financial Aid

(\$ in millions)

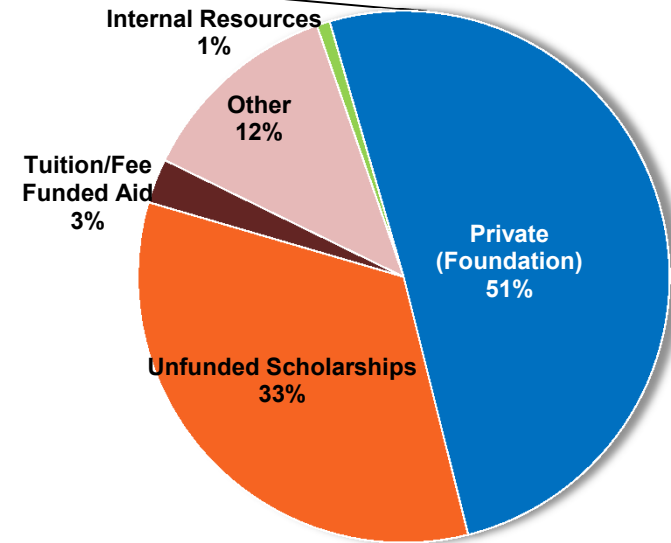
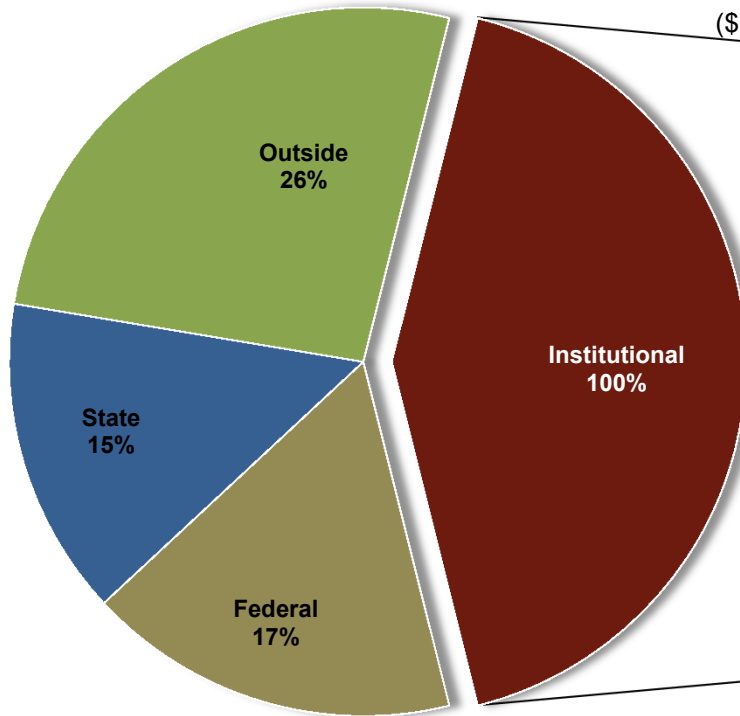
	2013-14	2014-15	2015-16
<u>Graduate</u>			
<b>Federal</b>	0.2	0.0	0.0
<b>State</b>	4.5	4.5	4.5
<b>Institutional</b>			
Graduate Tuition Remission	60.1	64.0	68.8
Tuition/Fee Funded Aid	0.0	0.0	0.2
Other Graduate (1)	3.6	3.7	3.7
Private (Foundation)	2.8	2.6	2.7
<i>Subtotal Institutional</i>	66.5	70.3	75.4
<b>Outside</b>	6.6	6.7	7.5
<i>Subtotal Graduate</i>	77.8	81.5	87.4
<i>Total Undergraduate and Graduate</i>	<u>\$ 177.4</u>	<u>\$ 182.0</u>	<u>\$ 194.8</u>

(1) Other Graduate includes waivers codified in the Code of Virginia and educational benefits for employees, and internal resources used to support graduate students.

# Sources of Undergraduate Grants and Scholarships

## 2015-16

(\$ in millions)



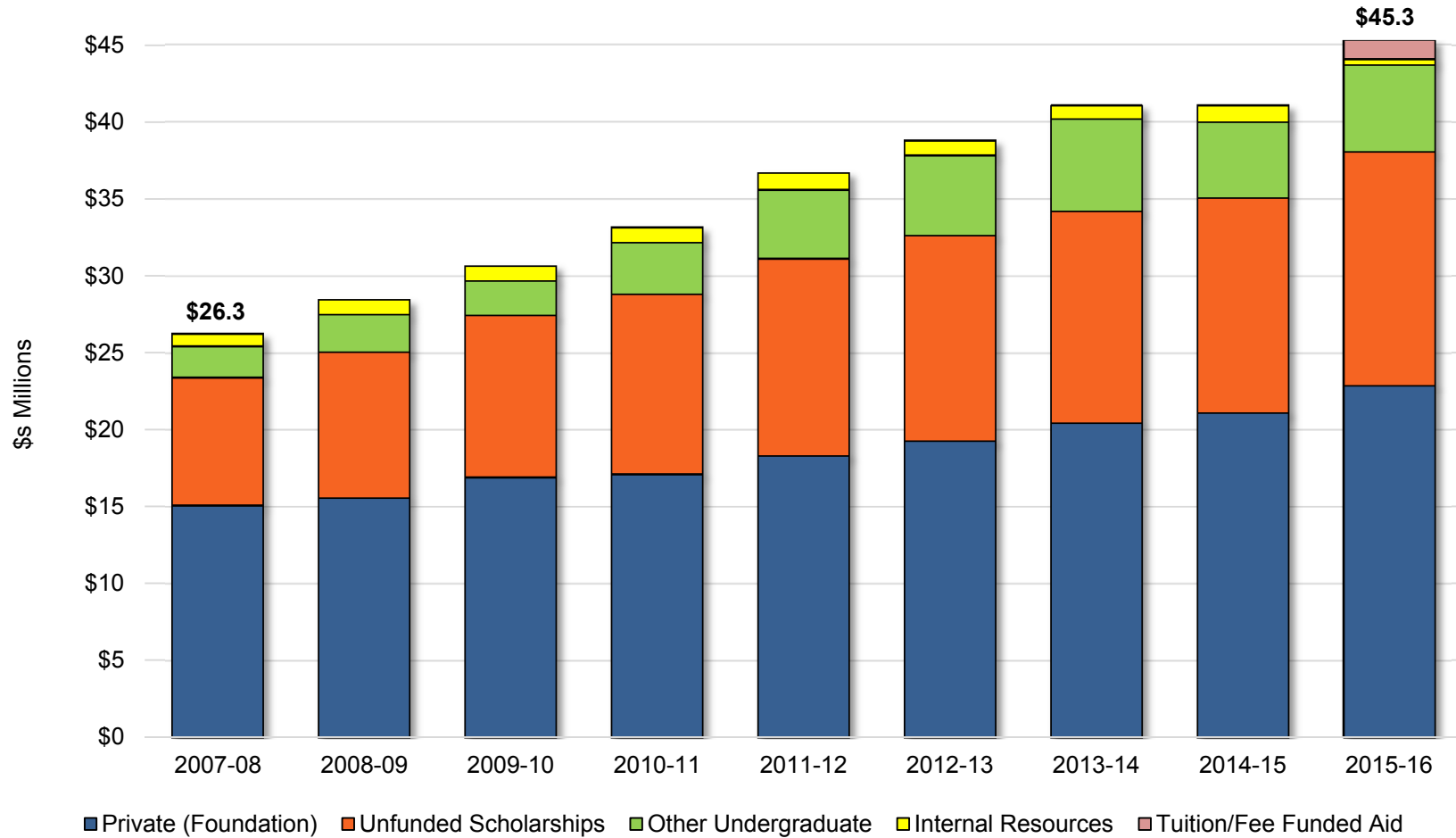
Federal:	\$ 18.3
State:	15.6
Institutional:	45.3
Outside:	28.2
<b>Total:</b>	<b>\$ 107.4</b>

Unfunded Scholarships:	\$15.1
Tuition/Fee Funded:	1.2
Internal Resources:	0.4
Other:	5.7
Private (Foundation):	22.9
<b>Total:</b>	<b>\$ 45.3</b>

*Institutional resources provided \$45.3 million of financial aid to 10,235 undergraduate students in 2015-16, an average of \$4,426 per student.*

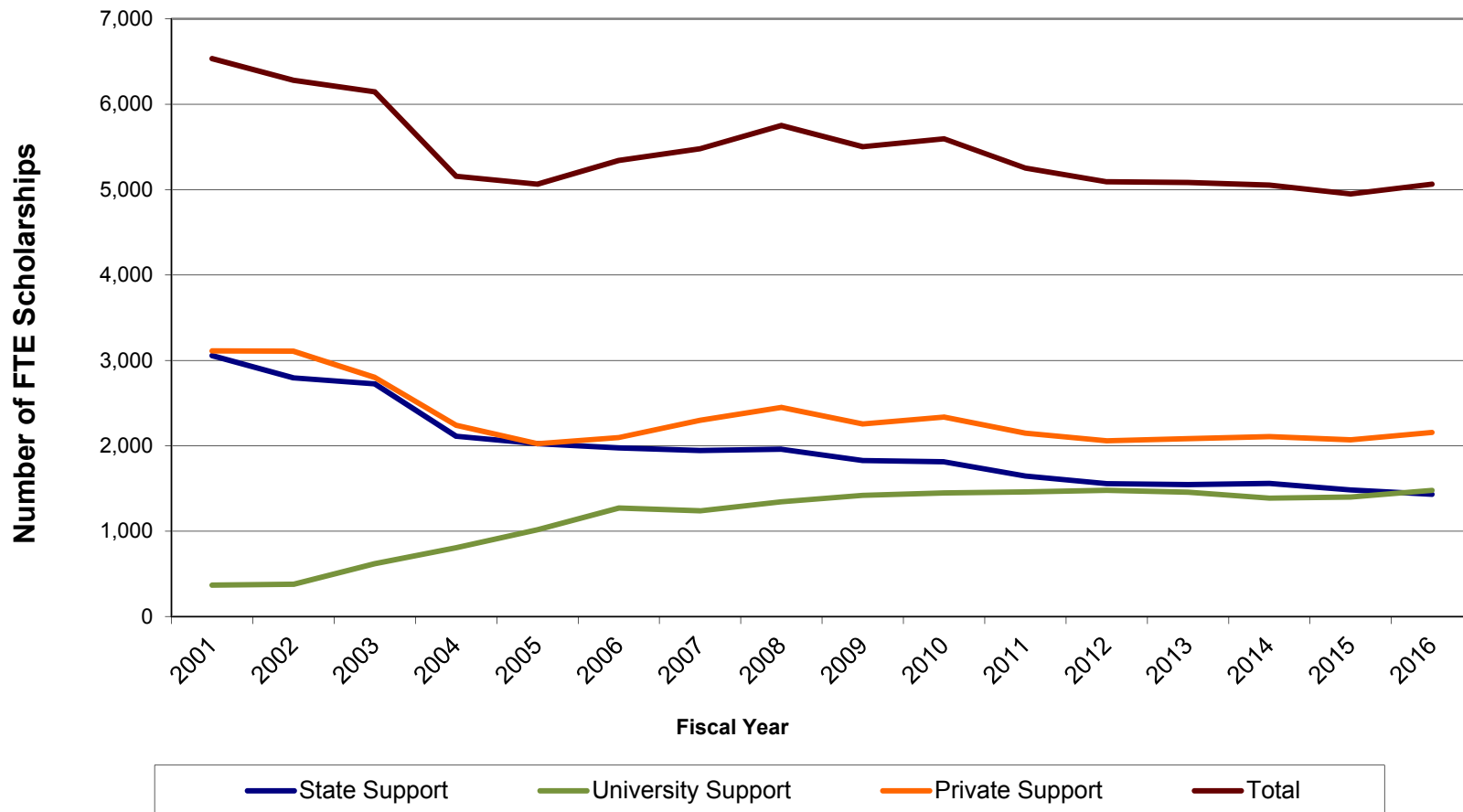


# Undergraduate Institutional Support at Virginia Tech



# Analysis of State & Institutional Support for Undergraduate Scholarships

Full-time Equivalent Undergraduate Scholarships



# Undergraduate Scholarships Institutional Programs

## 2015-16 Funds For the Future Program

- Shelters returning students from tuition increases at increasing levels dependent upon need.
- Ensures that students with the most need are not priced out due to tuition increases.

Family Income (AGI)	Number of Virginia Undergraduates Receiving Award	Number of Nonresident Undergraduates Receiving Award
\$0 - \$49,999	1,518	281
\$50,000 - \$74,999	731	166
\$75,000 - \$99,999	709	181
<b>Total</b>	<b>2,958</b>	<b>628</b>

# Undergraduate Scholarships Institutional Programs

## 2016-17 Funds For the Future Enhancements

- Covers 100% of tuition increases for students with family income up to \$74,999
- Covers 50% of tuition increases for students with family income from \$75,000 to \$87,499

### 2016-17 FFF Program Parameters

Family Income (AGI)	Undergraduate Tuition & Fee Increase Protection*	Example Impact of FFF Protection for Undergraduate Student	
		Total Tuition & E&G Fee Increase	Net Impact of Tuition & Fee Increase
\$0 - \$74,999	100%	2.9%	0%
\$75,000 - \$87,499	50%	2.9%	1.5%
\$87,500 - \$99,999	25%	2.9%	2.2%

# Undergraduate Scholarships Institutional Programs

## VT Grant

- Provides additional need based aid to undergraduate students to reduce unmet need.

## Other Strategic Aid Programs

- Presidential Scholarship Initiative to assist low-income and first-generation Virginia students with significant financial need
- VT Scholars award to recruit academically talented students and advance university first generation enrollment goals
- Emerging Leaders Scholarship for participants in the Corps of Cadets

# Undergraduate Scholarships Institutional Programs

## Other Strategic Aid Programs

- Presidential Campus Enrichment Grants and Alumni Presidential Scholar Program serve both students with need and students who demonstrate merit to achieve university enrollment goals
- University match of the federal Yellow Ribbon program for military veterans and dependents
- Scholarships to defray a portion of a student's costs to study at the Steger Center for International Scholarship
- Scholarship support to help offset the higher costs of study abroad programs

# Employment Opportunities

**Many employment opportunities are available to help to support student financial need, including:**

## **Federal Work-Study:**

- Provides financial aid award between \$1,500 and \$2,500 (based on need) in addition to wage employment.
  
- **811** students participated in work-study in 2015-16.
  - Undergraduate: 791 participants
  - Graduate: 20 participants
  
- Program is subsidized by the federal government and supported, in part, by the university.

# Employment Opportunities

**Many employment opportunities are available to help to support student financial need, including:**

## **Wage Employment:**

- Provides hourly university employment in many departments across campus.
  
- **7,331** students held wage appointments in 2015-16.
  - Undergraduate: 6,239 participants
  - Graduate: 1,092 participants



# Employment Opportunities

**Many employment opportunities are available to help to support student financial need, including:**

## **Graduate Assistantships:**

- Offers tuition remission and a stipend in return for student effort through research, service, or teaching appointments.
- **3,232** graduate students (full-time equivalent) held assistantship appointments in 2015-16.
  - Represents 72% of the full-time graduate student population.

# Trends in Student Indebtedness

## Average Debt per Borrower and Percentage of Students Graduating with Debt

Class of:		2012	2013	2014	2015	2016
VT	\$	\$ 25,672	\$26,807	\$27,865	\$28,873	\$28,884
	%	54%	55%	53%	53%	51%
National Average	\$	\$27,850	\$28,400	\$28,950	N/A	N/A
	%	68%	69%	69%	N/A	N/A

# Student Debt Repayment

## Cohort Default Rate for Federal Direct Loan and Federal Family Education Loans

### 2013 Cohort

Virginia Tech	1.6%
Peer Group average	2.8%

A **cohort default rate** is the percentage of a school's borrowers who enter loan repayment status during a federal fiscal **year** (10/1 – 9/30) and **default** within the next two fiscal years.

# Trends in Student Need

## Comparison of Net Price for Undergraduate Residents

- The university remains competitive in terms of the average Cost of Attendance, but has an opportunity to enhance the Net Price competitiveness for low and middle-income students.

	Cost of Attendance (Sticker Price)	Average Net Price by Income (2014-15 data)				
		\$0-\$30,000	\$30,001-\$48,000	\$48,001-\$75,000	\$75,001-\$110,000	\$110,001 +
Virginia Tech	\$25,837	\$12,735	\$15,069	\$18,819	\$22,441	\$24,523
National Peer Average	\$29,558	\$9,833	\$11,651	\$15,923	\$21,630	\$25,911
<b>Advantage/(Disadvantage)</b>	<b>\$3,721</b>	<b>\$(2,902)</b>	<b>\$(3,418)</b>	<b>\$(2,896)</b>	<b>\$(811)</b>	<b>\$1,388</b>
Virginia Tech	\$25,837	\$12,735	\$15,069	\$18,819	\$22,441	\$24,523
Select VA Doctorals	\$29,093	\$7,084	\$8,278	\$13,738	\$21,363	\$26,935
<b>Advantage/(Disadvantage)</b>	<b>\$3,256</b>	<b>\$(5,651)</b>	<b>\$(6,791)</b>	<b>\$(5,081)</b>	<b>\$(1,079)</b>	<b>\$2,412</b>

- Net Price is the remaining cost to the student after all available financial aid resources are applied to the total Cost of Attendance which includes tuition, fees, room & board, and other expenses.

# Trends in Student Need

## Average Unmet Need

	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>	<b>2015-16</b>
Virginia Undergraduate	\$4,457	\$5,668	\$5,814	\$5,299	\$5,480
% of Average Unmet Need	31.4%	36.8%	36.7%	33.2%	34.1%
Nonresident Undergraduate	\$8,380	\$10,273	\$10,541	\$9,783	\$10,855
% of Average Unmet Need	40.0%	45.9%	45.8%	41.8%	44.4%

## Current Events

- University continues to advance strategies to raise additional funding for student financial aid, specifically to reduce the net price for Virginia undergraduates in the lowest three income quintiles.
- Scholarship program is also integral to achieving enrollment targets, particularly nonresident undergraduate. This provides resources to support resident students and university strategic initiatives.
- In an era of modest tuition increases, institutional support for financial aid is significantly constrained and has practical limits.
- For 2016-17, the state provided an additional \$0.5M General Fund support for undergraduate student financial aid. This support is appreciated. The state is reviewing the statewide allocation methodology and may adjust the level of institutional aid support in the future.
- As a result, the university must continue to support institutional financial aid programs, with an emphasis on expanding student financial aid funding through private philanthropy.

# Questions?

# **Virginia Tech Foundation Endowment Scholarship Funds Utilization and Expenditure Plans**

## **FINANCE AND AUDIT COMMITTEE**

**September 26, 2016**

### **Background**

University Development supports the vision of Virginia Tech by generating private resources for scholarships and awards for students. These privately-funded scholarships and resources are received, managed, and disbursed by the Virginia Tech Foundation (Foundation). University colleges and departments are responsible for awarding and administering the scholarships to eligible students based upon donor intent. Beginning with the March 2006 Board meeting, the Finance and Audit Committee received an annual report on the Virginia Tech Foundation Endowment Scholarship Funds Expenditure Plans. The report was presented in response to the Board's request to provide information regarding the utilization of scholarship funds and the establishment of a proper level of reserve for colleges and departments.

In fiscal year 2013, Enrollment and Degree Management conducted a thorough review of the policy, procedures, and practices related to the administration of privately-funded scholarships. As a result of the review, Enrollment and Degree Management implemented comprehensive action plans to improve the utilization of scholarship funds for the benefit of the students. Additionally, the title and format of the report was changed to provide relevant information related to scholarship utilization for the fiscal year and the scholarship expenditure plans for the upcoming year.

To facilitate effective management and utilization of available scholarships in fiscal year 2016, Enrollment and Degree Management provided extensive guidance to scholarship managing units to assure continuous improvement in intentional utilization of endowed scholarship funding. Enrollment Management supported departments in utilization of their scholarship funding through enhanced procedures, customized reports, and data analysis. Enrollment Management in collaboration with the Foundation and University Development continued the review of the "hard to award" scholarships listed by units in their FY 2015-16 spending plans. Results of the review included a recommended plan for collaborating with University Development in facilitating discussions with donors to amend fund criteria to enable awarding of scholarships to eligible students.

As reflected in the report, these identified efforts and improvements have assisted the university in making a significant progress towards the ultimate goal of leveraging financial resources to meet Virginia Tech's enrollment, diversity, and affordability goals.



## Report

Attachments A and B provide detailed information related to the scholarship utilization for fiscal year 2015-16 and the scholarship expenditure plans for the upcoming year.

*Attachment A* displays the Endowed Scholarship Utilization for fiscal year 2015-16. The report demonstrates the performance of each college in awarding available scholarships against established budgets. Key elements on the report include:

- **Building Reserve:** As shown on the schedule, university policy allows colleges to establish a “building reserve” from the total resources available to the college. The reserve allows the units to plan for scholarship commitments and needs beyond the current fiscal year.
- **Hard to Award:** The total available resources are also reduced by the “hard to award” scholarships. The “hard to award” scholarships are funds where a donor agreement provides awarding criteria that are vague, restrictive, or do not provide adequate clarification.

Enrollment Management implemented appropriate controls to monitor the reserve amounts as well as the hard to award scholarships to ensure that the scholarship amounts are fully utilized while balancing the needs of the units. Units are required to (i) provide appropriate justification for the requested reserve amount and (ii) review the scholarships identified as “hard to award” with Enrollment and Degree Management and University Development during the spending plan development and approval process. The Vice Provost for Enrollment and Degree Management reviews and approves the spending plans annually. Development of the scholarship spending plans by each university unit with subsequent review and approval by the Enrollment and Degree management has proven to be an effective tool in helping the university improve the percentage of awarded scholarships.

*Attachment B* provides information on the Endowed Scholarship Spending plan for fiscal year 2016-17. Colleges, Office of University Scholarships and Financial Aid (USFA), and other senior management areas managing privately funded scholarships are required to develop a spending plan for the upcoming fiscal year that specifies how the departmental scholarship monies will be spent to achieve university enrollment goals and enhance student access to a Virginia Tech education. This schedule displays the total resources available to the Colleges and USFA for awarding scholarships to students. Another component of the spending plan is the aforementioned “hard to award” scholarships. University policy requires awarding units to proactively identify such scholarship funds and gives guidance on the proper handling of such funds. Enrollment and Degree Management reviews the justification provided by the units for the “hard to award”

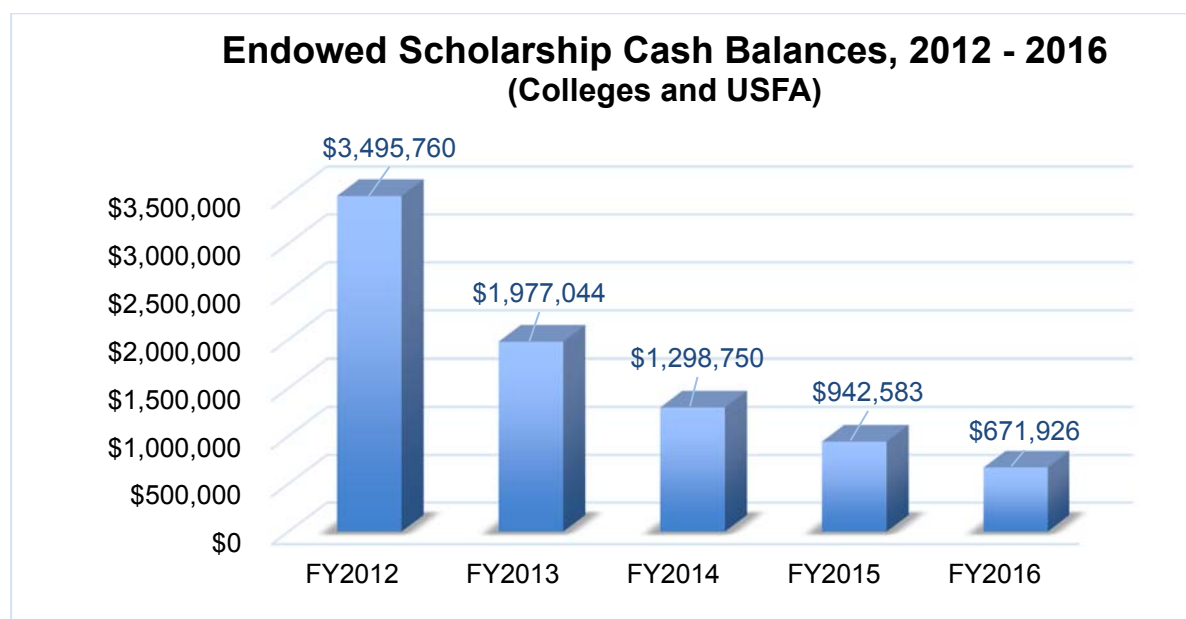
scholarships and coordinates with the units, Foundation, and University Development to establish and implement actions that can be taken to minimize such scholarships. University policy recommends working with University Development and Foundation to propose a change of criteria for an award or purpose of a fund agreement. Such changes have to be approved by the donor or the donor's representative.

*Attachment C* shows the beginning and ending balance of the Endowments for each College and the Office of University Scholarships and Financial Aid.

### Results of 2015-16 Scholarship Utilization

In fiscal year 2016, colleges and the Office of University Scholarships and Financial Aid (USFA) continued to make progress in awarding endowed scholarships, consistent with the approved spending plan and in compliance with University Policy 3400 *Administration of Privately-funded Scholarships*. Accounting for the approved "building reserve" and "hard to award" funds, colleges and USFA utilized 96.4 percent of available endowed scholarship funds. Noteworthy among the colleges is the College of Veterinary Medicine's high utilization rate of 98.9 percent of endowed scholarships.

The significant improvement of scholarship utilization following creation and implementation of new guidelines and goals is reflected in the chart below. **Since 2012, the unspent balance of endowed scholarships reduced by \$2.8 million or 81 percent. Enrollment Management's continued leadership effort to reduce the unspent balances resulted in a further reduction of 29 percent in FY16 compared to FY15.**



## Management of Unspent Scholarship Balances

The available scholarship balances are impacted by the following factors:

- Approximately \$347,000 in additional income were added to endowed funds after the start of the fiscal year. The availability of these additional funds was unknown to units during the planning stage. A significant portion of this additional income was posted to the respective funds in the 2<sup>nd</sup> half of the fiscal year. Due to the timing of the additional income, strategic and intentional utilization of the scholarship fund is challenging and could result in either late academic year awards or deferral to the upcoming year.
- The “building reserve” and “hard to award” funds constitute 49 percent of the FY 2016 unspent balance of \$671,926. As a result of improved planning and intervention, the “hard to award” funds for endowed scholarships in fiscal year 2016 were reduced by 78 percent, specifically from \$728,947 in FY 2014 to \$157,090 in FY 2016.

Reviewing the “hard to award” scholarships requires significant dedication of resources from Enrollment Management, University Development, and individual units. However, such a review will be an ongoing annual goal until the university has made attempts to revise all “hard to award” funds.

- Likewise, Enrollment and Degree Management closely monitors planned “building reserve” monies to ensure each college is fully implementing its stated plan for utilization. In fiscal year 2016, only 1.8 percent of available funds were set aside to “building reserve” funds. Of particular note is the number of units and colleges - USFA, Veterinary Medicine, and Natural Resources and Environment that fully awarded their funds set aside to “building reserve” in FY 2016.

The university fully expects to continue its goal of quality improvement in its scholarship utilization planning and reflect success in meeting Virginia Tech’s strategic goals of enrollment, access and affordability.

**VIRGINIA TECH**  
**Endowed Scholarship Utilization**  
 Year ended June 30, 2016

College or Operating Unit	Available Resources			Scholarship Awards and Other Actions					Ending Cash Balance  i = (c - g - h)
	Beginning Cash Balance <sup>(1)</sup>  (a)	Actual Cash Earnings <sup>(2)</sup>  (b)	Total Resources Available (c = a + b)	Building Reserve  (d)	Hard to Award <sup>(3)</sup>  (e)	Scholarship Budget <sup>(4)</sup>  (f = c - d - e)	Actual Awards  (g)	Returned Funds <sup>(5)</sup>  (h)	
College of Agriculture & Life Sciences	154,463	744,488	898,951	26,078	51,356	821,516	719,499	26,969	152,482
College of Architecture & Urban Studies	11,099	209,240	220,339	599	4,093	215,646	198,400	-	21,939
College of Business	82,548	1,334,764	1,417,312	36,142	5,765	1,375,405	1,290,871	38,566	87,875
College of Engineering	355,417	2,493,715	2,849,132	108,184	17,640	2,723,308	2,566,797	98,317	184,018
College of Liberal Arts & Human Sciences	73,899	372,205	446,105	372	10,406	435,326	390,596	1,701	53,807
College of Science	10,321	372,514	382,835	2,407		380,427	344,715	17,206	20,914
College of Veterinary Medicine	51,932	707,158	759,089		11,524	747,566	739,032	-	20,058
College of Natural Resources & Environment	29,113	167,822	196,934			196,934	183,445	2,349	11,140
University Student Financial Aid <sup>(6)</sup>	163,773	2,199,756	2,363,530		56,306	2,307,224	2,239,948	3,889	119,693
<b>Grand Total</b>	<b>932,565</b>	<b>8,601,661</b>	<b>9,534,226</b>	<b>173,783</b>	<b>157,090</b>	<b>9,203,353</b>	<b>8,673,302</b>	<b>188,998</b>	<b>671,926</b>

- (1) The beginning cash balances in this report varies from the beginning cash balance reported in FY 2015-16 spending plan due to one fund in College of Liberal Arts & Human Sciences being reclassified by the Foundation as non-scholarship fund. Also another fund was transferred from the University Student Financial Aid to the VP for Student Affairs.
- (2) The actual cash earnings include the annual endowment payout plus any adjustment recorded to fund income after the start of the fiscal year.
- (3) Hard to Award scholarships are funds where the donor agreements provide awarding criteria that are vague, restrictive, and do not provide adequate clarification for awarding. University policy, "Administration of Privately-funded Scholarships and Other Awards" provides guidance on handling of such funds.
- (4) The scholarship budget is defined as the total resources available minus funds set aside to build reserve and hard to award scholarships.
- (5) The returned funds include endowed income not awarded and returned to the endowed fund principal per fund agreement. The departments must make every effort to award all income payout per donor intent in the agreement before considering returning funds to the endowment.
- (6) USFA funds do not include Brookings loans. Brookings loans is an endowed scholarship where the money awarded to students must be repaid to comply with the Fund agreement.

Source: Enrollment and Degree Management

**VIRGINIA TECH**  
**Endowed Scholarship Spending Plan: Fiscal Year 2016-17**

College or Operating Unit	Year Ended June 30, 2017						
	Total Available Resources			Spending Plan			
	Beginning Cash Balance <sup>(1)</sup> (a)	Projected Cash Earnings (b)	Total Resources Available (c = a + b)	Building Reserve <sup>(2)</sup> (d)	Hard to Award <sup>(3)</sup> (e)	Scholarship Budget <sup>(4)</sup> (f = c - d - e)	Projected Ending Cash Balance <sup>(5)</sup> (g = c - f)
College of Agriculture & Life Sciences	152,213	751,335	903,548	22,454	86,880	794,213	109,335
College of Architecture & Urban Studies	21,939	214,408	236,347	-	-	236,347	-
College of Business	87,875	1,354,051	1,441,926	36,288	19,792	1,385,847	56,080
College of Engineering	184,018	2,522,939	2,706,957	47,648	858	2,658,451	48,506
College of Liberal Arts & Human Sciences	53,807	380,114	433,921	-	7,469	426,452	7,469
College of Science	20,914	377,019	397,933	9,140	-	388,793	9,140
College of Veterinary Medicine	20,058	602,758	622,815	-	11,955	610,861	11,955
College of Natural Resources & Environment	11,140	180,093	191,233	4,418	-	186,815	4,418
University Student Financial Aid <sup>(5)</sup>	201,235	2,195,809	2,397,045	-	81,703	2,315,341	81,703
<b>Grand Total</b>	<b>753,199</b>	<b>8,578,526</b>	<b>9,331,725</b>	<b>119,948</b>	<b>208,658</b>	<b>9,003,119</b>	<b>328,606</b>

- (1) The beginning cash balance for College of Agriculture & Life Sciences is \$269 less than the unspent amount carried over from FY 2015-16 due to reclassification of a fund as non-scholarship fund. Also, the beginning cash balance for University Student Financial Aid is greater than the unspent amount carried over from FY 2015-16 due to a cash receipt of \$81,592.22 from collections of a loan made to Virginia Tech Carilion School of Medicine students in 2011.
- (2) Departments are allowed to set aside up to 5% of the total resources available to build reserve for future use or to address emergency situations.
- (3) Hard to Award scholarships are funds where the donor agreements provide awarding criteria that are vague, restrictive, and do not provide adequate clarification for awarding. University policy, "Administration of Privately-funded Scholarships and Other Awards" provides guidance on handling of such funds.
- (4) The scholarship budget is defined as the total resources available minus funds set aside to build reserve and the hard to award scholarships.
- (5) The projected ending cash balance includes \$119,948 building reserve funds and \$208,658 from hard to award scholarship funds that cannot be awarded due to unrealistic and/or overly restrictive selection criteria.
- (6) USFA funds do not include Brookings loans. Brookings loans are endowed scholarships where the money awarded to students must be repaid to comply with Fund agreement.

Source: Enrollment and Degree Management

**VIRGINIA TECH**  
**Scholarship Endowment Market Value**  
**Year ended June 30, 2016**

<b>College or Operating Unit</b>	<b>Ending Balance 06-30-2015</b>	<b>Ending Balance 06-30-2016</b>
College of Agriculture & Life Sciences	17,946,955	17,325,456
College of Architecture & Urban Studies	4,976,336	4,788,886
College of Business	30,458,181	29,896,306
College of Engineering	59,710,348	59,934,752
College of Liberal Arts and Human Sciences	8,851,302	8,835,341
College of Science	8,890,625	8,742,893
College of Veterinary Medicine	14,479,883	13,757,962
College of Natural Resources and Environment	4,218,449	4,214,334
University Student Financial Aid	56,537,392	53,060,066
<b>Grand Total</b>	<b>206,069,471</b>	<b>200,555,996</b>

Source: VT Foundation

# University Debt Ratio and Debt Capacity

## FINANCE AND AUDIT COMMITTEE

September 28, 2016

The Restructuring Act and the university's debt policy require that the university maintain a debt service to operations ratio of no greater than seven percent. In addition to the seven percent limitation, and based on guidelines provided by the Board of Visitors, management internally targets a five percent benchmark for planning purposes and subsequent recommendation to the Board. At the conclusion of fiscal year 2016, the university had outstanding long-term debt of \$525.6 million with a debt ratio of 4.18 percent.

The management of debt is critical to the success of the university's capital program and to meeting one of the conditions of eligibility for restructured operational authority with the Commonwealth. The required condition is that the university maintain an unenhanced bond rating from Moody's, Standard and Poor's, or Fitch of at least AA- or its equivalent. The university currently has an Aa1 rating from Moody's and a AA rating from S&P.

An established committee including representatives from Investments and Debt Management, the Controller's Office, Capital Assets and Financial Management, and the Budget Office meets regularly to review debt activities and the timing of debt issuances to ensure compliance with the five percent debt ratio and potential impacts to credit ratings. The Vice President for Finance and Chief Financial Officer provides oversight of these activities.

Attachment A includes the outstanding long term debt and debt ratio calculation for the current fiscal year and a summary of estimated potential issuances through fiscal year 2022 and future debt ratios and related capacity for each year. The schedule includes a three-year trailing period through fiscal year 2025 to show the full impact of loading principal and interest payments.

Attachment B shows an illustration of potential debt issuances for certain projects spread over time.

Attachment C shows a trend line of the university's debt ratio from fiscal year 2002 to 2025. The debt ratio is calculated as debt service over operating expenditures. Management routinely examines, prioritizes, and adjusts an allocation plan to ensure the debt ratio remains within five percent.

Attachment D shows a benchmark comparison of fiscal year 2015 debt ratios from Moody's for Virginia Tech and 23 other peer institutions, which are calculated as debt service over operating expenditures.

Attachment E shows the fiscal year 2015 benchmark comparison of the annual liquidity of unrestricted assets to total debt from Moody's for Virginia Tech and 23 other peer institutions.

As part of the university's capital outlay planning and debt management program, the university will continue to develop capital outlay plans that advance projects within the debt policy and restructuring conditions and will carefully review each project in consideration of the university's debt capacity before submitting project authorizations for debt to the Board.

**University Debt Ratio and Debt Capacity Based on Expected Debt Issuances**  
**FINANCE AND AUDIT COMMITTEE**  
**September 28, 2016**  
**(Dollars in Thousands)**

Fiscal Year	Actual	Estimated Issuances						Trailing Period		
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-2021	2021-22	2022-23	2023-24	2024-25
Long-Term Debt Outstanding, Start of Year	\$ 491,497	\$ 525,553	\$ 528,431	\$ 504,194	\$ 514,465	\$ 665,451	\$ 772,661	\$ 807,246	\$ 755,611	\$ 703,578
Net New Long-Term Debt Issuance	65,765	3,000	9,000	43,500	187,000	147,500	82,400	-	-	-
Current Year Refunding Bonds	8,205	32,210								
Current Year Refunded / Defeased Bonds	-									
Net Long-Term Debt Repayment	(39,914)	(32,332)	(33,237)	(33,229)	(36,013)	(40,291)	(47,814)	(51,635)	(52,033)	(53,836)
<b>Total Long-Term Debt Outstanding, End of Year</b>	<b>\$ 525,553 <sup>(1)</sup></b>	<b>\$ 528,431</b>	<b>\$ 504,194</b>	<b>\$ 514,465</b>	<b>\$ 665,451</b>	<b>\$ 772,661</b>	<b>\$ 807,246</b>	<b>\$ 755,611</b>	<b>\$ 703,578</b>	<b>\$ 649,743</b>
Total Debt Service	\$ 55,013 <sup>(1)</sup>	\$ 54,164	\$ 53,050	\$ 53,327	\$ 56,711	\$ 60,648	\$ 70,702	\$ 78,176	\$ 79,328	\$ 79,036
Total Operating Expenditures	1,315,377 <sup>(1)</sup>	1,364,704	1,409,057	1,454,851	1,502,133	1,550,953	1,601,359	1,653,403	1,694,738	1,737,106
<b>Debt Ratio</b>	<b>4.18%</b>	<b>3.97%</b>	<b>3.76%</b>	<b>3.67%</b>	<b>3.78%</b>	<b>3.91%</b>	<b>4.42%</b>	<b>4.73%</b>	<b>4.68%</b>	<b>4.55%</b>
5% of Operating Expenditures	\$ 65,769	\$ 68,235	\$ 70,453	\$ 72,743	\$ 75,107	\$ 77,548	\$ 80,068	\$ 82,670	\$ 84,737	\$ 86,855
Additional Allowable Debt Service	10,756	14,071	17,403	19,416	18,396	16,900	9,366	4,494	5,409	7,819
<b>Additional Debt Capacity (at 5%)</b>	<b>\$157,823</b>	<b>\$210,313</b>	<b>\$255,351</b>	<b>\$282,289</b>	<b>\$262,634</b>	<b>\$238,032</b>	<b>\$130,158</b>	<b>\$62,448</b>	<b>\$75,162</b>	<b>\$108,660</b>

**Assumptions:**

\* Total Operating Expenditures for FY17 through FY25 are estimated based on the following growth rate: 3.75% for FY17, 3.25% for FY18-FY23, and 2.5% for FY24 and thereafter.

\* Estimated Cost of Capital includes: 2.95% for FY17; 3.15% for FY18; 3.25% for FY19; 3.45% for FY20, 3.60% for FY21, and 3.75% for FY22 and thereafter.

**Notes:**

(1) Unaudited actual.

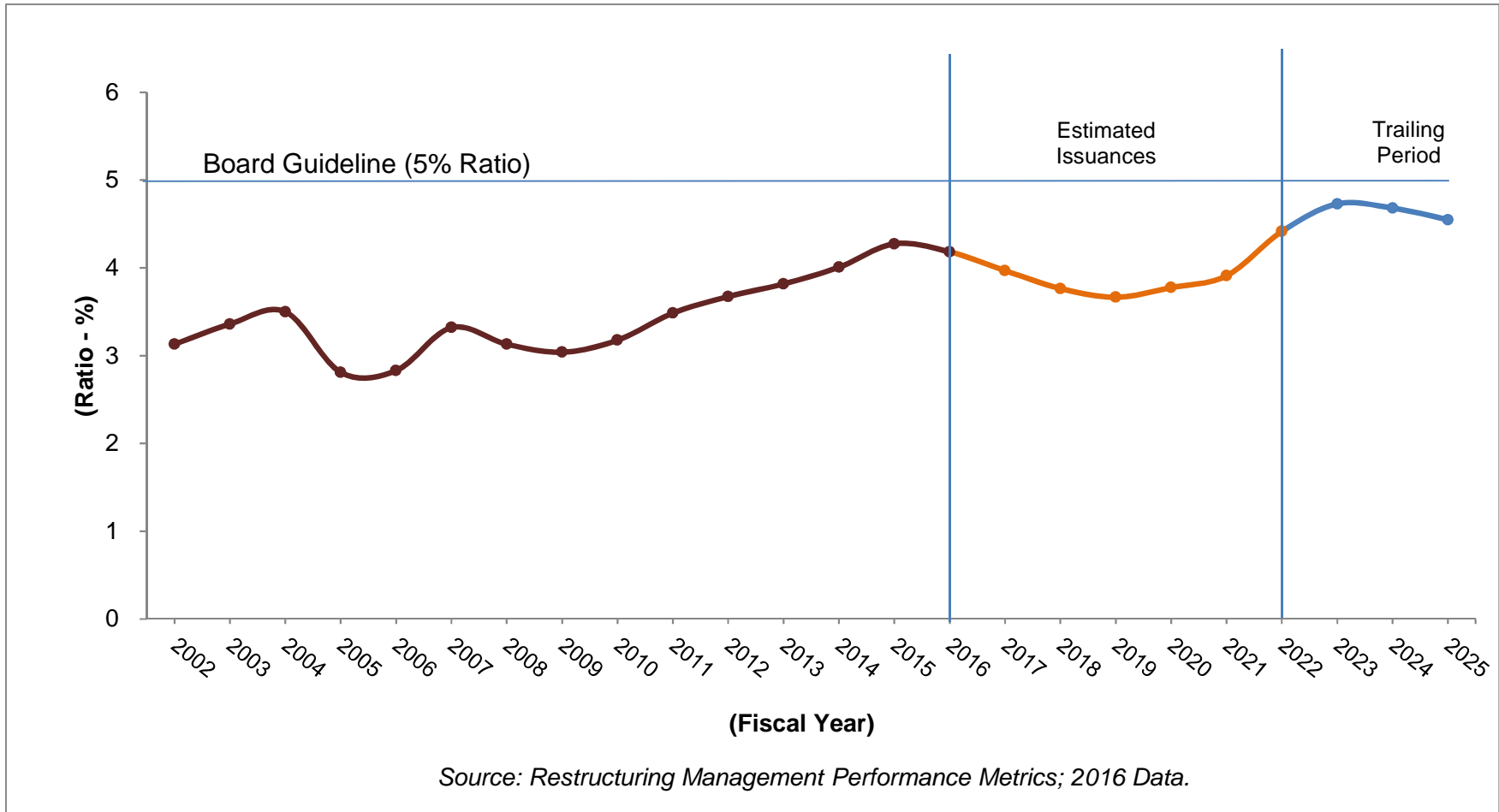


**Illustration of Debt Allocations Within a Five Percent Ratio**  
**FINANCE AND AUDIT COMMITTEE**  
**As of September 28, 2016**  
**(Dollars in Thousands)**

	<u>Actual</u>	<u>Planning Projections</u>					<u>Trailing Period</u>			<u>Total</u>	
	<u>2015-16</u>	<u>2016-17</u>	<u>2017-18</u>	<u>2018-19</u>	<u>2019-20</u>	<u>2020-21</u>	<u>2021-22</u>	<u>2022-23</u>	<u>2023-24</u>		<u>2024-25</u>
<b><u>Authorized Projects</u></b>											
<b><u>Completed Issuances</u></b>											
Upper Quad Residential Facilities	\$ 51,425										
Unified Communications & Network Renewal	6,160										
Electric Substation	4,390										
South Rec. Fields Replacement	3,280										
Indoor Athletic Training Facility	510										
<b><u>Scheduled Issuances</u></b>											
Virginia Automation Park		\$ 3,000									\$ 3,000
Health Sciences and Technology				\$ 17,000							17,000
Holden Hall Renovation & Expansion				17,500							17,500
	65,765	3,000	-	34,500	-	-	-	-	-	-	37,500
<b><u>Placeholder Issuances for High Priority Planning Items</u></b>											
Building Envelope Repairs			\$ 9,000	9,000	\$ 9,000	\$ 9,000	\$ 9,000				45,000
Corps Leadership & Military Science					14,000						14,000
Myers Lawson School of Construction (Hitt)					7,000						7,000
Student Wellness Services					60,000						60,000
O'Shaughnessy Renovation					20,000						20,000
New Dining Hall					25,000						25,000
Intelligent Infrastructure Laboratories					10,000						10,000
Residential Learning Community (400 beds) - Athletics/Creativity					42,000						42,000
Business Learning Community (academic)								35,000			35,000
Residential Learning Community (350 beds) - Business								36,750			36,750
Residential Learning Community (350 beds) - Global								36,750			36,750
Commons on GLC Lot								30,000			30,000
Engineering Renewal - Randolph Hall									24,400		24,400
Residential Renovations of Existing Facilities									24,000		24,000
Dining System Improvements									25,000		25,000
	-	-	9,000	9,000	187,000	147,500	82,400	-	-	-	434,900
<b>Total Authorized and Placeholder Issuances</b>	<b>\$ 65,765</b>	<b>\$ 3,000</b>	<b>\$ 9,000</b>	<b>\$ 43,500</b>	<b>\$ 187,000</b>	<b>\$ 147,500</b>	<b>\$ 82,400</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 472,400</b>
<b><u>Net Capacity at five percent ratio</u></b>	<b>\$157,823</b>	<b>\$210,313</b>	<b>\$255,351</b>	<b>\$282,289</b>	<b>\$262,634</b>	<b>\$238,032</b>	<b>\$130,158</b>	<b>\$62,448</b>	<b>\$75,162</b>	<b>\$108,660</b>	

FINANCE AND AUDIT COMMITTEE

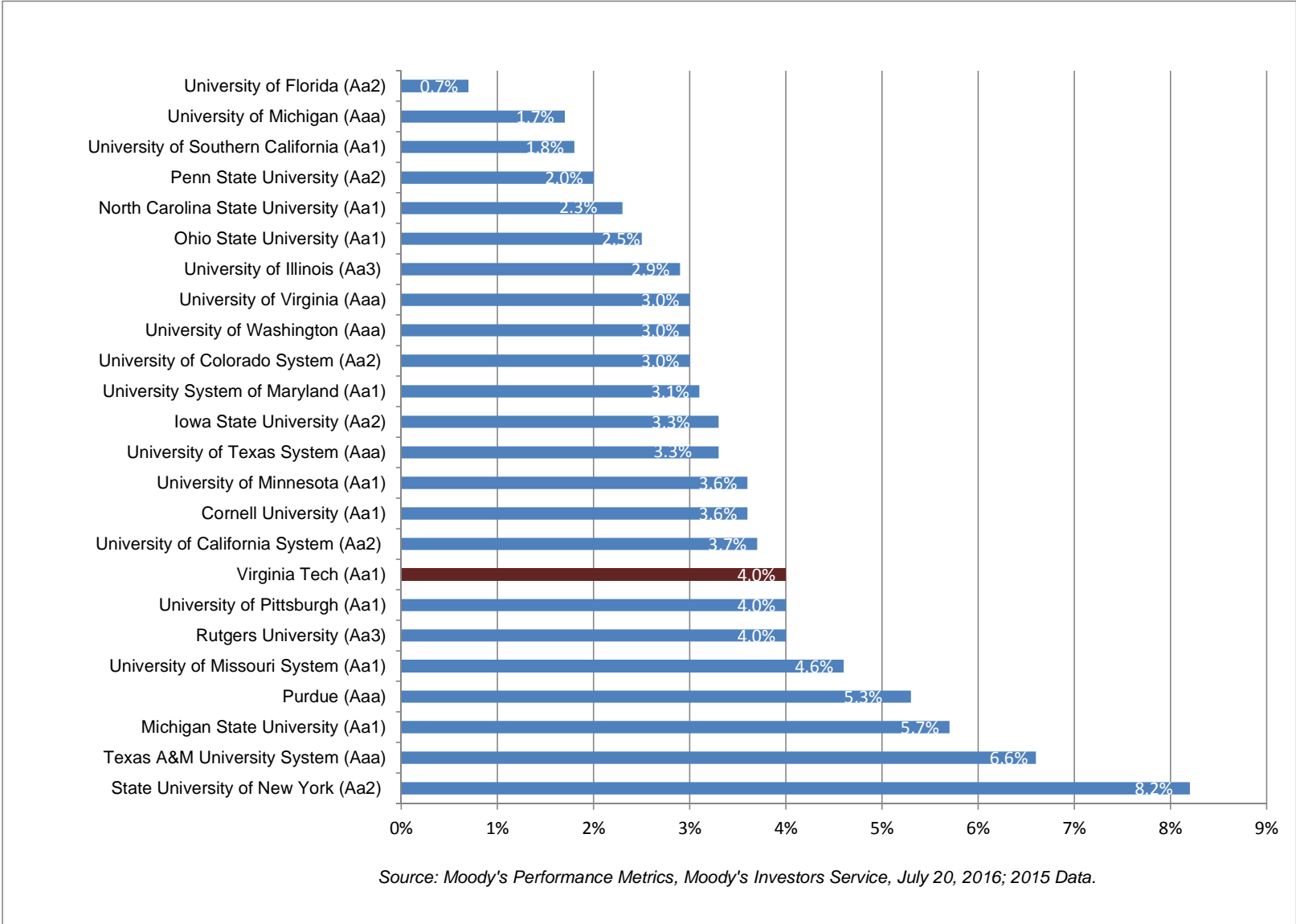
September 28, 2016



Maroon = Actual Debt Burden Ratio  
Orange = Projected Debt Burden Ratio  
Blue = Trailing Period Debt Burden Ratio

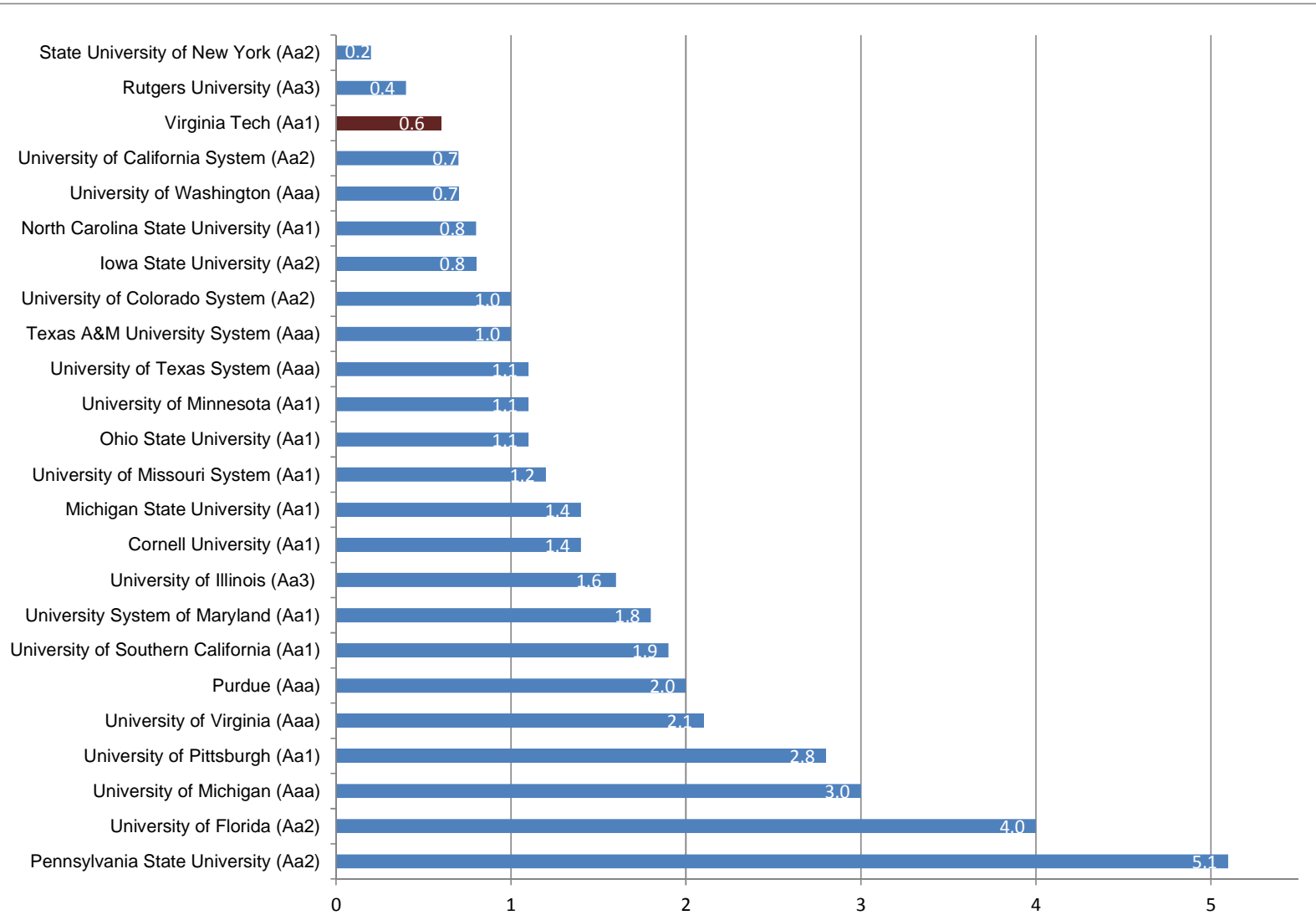
FINANCE AND AUDIT COMMITTEE

September 28, 2016



FINANCE AND AUDIT COMMITTEE

September 28, 2016



Source: Moody's Performance Metrics, Moody's Investors Service, July 20, 2016; 2015 Data.

**Accounts Receivable and the Write-off of Delinquent Accounts  
For the Fiscal Year Ended June 30, 2016**

**FINANCE AND AUDIT COMMITTEE**

**September 26, 2016**

**Overview**

Current accounts receivable are generated by several components within the university as part of the annual operating activities. Student accounts receivable and the receivables generated through the sponsored research program represent the largest components of the total receivables. Current and noncurrent notes receivable are generally comprised of student loan receivables administered by the university. To properly account for and control these assets, the university uses a combination of centralized and decentralized systems.

The Bursar's Office is responsible for the centralized accounts receivable system operation and monitoring the activities of the decentralized operations through reviews of reports and discussions with personnel who have been delegated the responsibility for billing and collecting accounts. The Bursar's Office is also responsible for managing the collection process for all delinquent accounts. Information from the receivable systems is consolidated quarterly by the Controller's Office and reported to senior management and the State Comptroller. The quarterly report uses a combination of narratives, tables, and graphs to report receivables, analyze trends, and identify areas where emphasis or action is needed. The Controller's Office is responsible for the implementation of corrective action to ensure that the receivables are properly managed.

**Composition and Aging of the Receivables**

Accounts receivable: Attachment A provides the composition of the current gross receivables at June 30, 2016, with comparative data for the previous year. Attachment B provides a graph for the aging analysis of the gross receivables at June 30, 2016, with comparative data for the previous three years. The total current receivables write-offs for these four years are also overlaid on this graph as another way to put them in perspective.

Notes receivable – from students: Federal and Institutional Loans (issued by Virginia Tech from gifts and donated funds designated to be used for loans) to students require the execution of a promissory note. These loan receivables are repaid over 10 or more years after a student's last enrollment at the university and the amount due in the next 12 months is classified as a current notes receivable for the university's financial statements.

Attachment F provides the composition of the total gross federal and institutional student loan receivables at June 30, 2016, with comparative data for the previous year.

## **Collection Efforts and Write-offs**

Because of the nature of the accounts receivables, their impact on the university's operating budget, and the university's aggressive policy for collecting delinquent accounts, the annual write-off of uncollectible accounts is relatively small. The average annual write-off for accounts receivable for the past three years is \$836,615. The fiscal year 2016 write-off total of \$552,820 represents only 0.06 percent (less than one tenth of one percent) of the annual operating revenues<sup>1</sup> per the audited financial statements for fiscal year 2015.

The fiscal year 2016 write off total includes two sponsored projects for a total of \$138,611. Theta Tech LLC owed the university \$64,499; however the corporation was dissolved, so no further collection efforts will be pursued. The New Jersey Economic Development Authority write off in the amount of \$74,112 is the result of unsuccessful negotiations to resolve disputed deliverables and terms and conditions on this contract.

Various techniques are used for collecting delinquent accounts receivables depending on the customer and type of account. For example, students must pay past due amounts before they are allowed to enroll for the next school term. Other delinquent accounts are placed with commercial collection agencies and the State Attorney General's Office for collection. The State Comptroller provides guidance on collection policies and procedures, and the university generally complies with the State Comptroller's recommendations, except where improved practices have been implemented under the Restructuring Act.

### **Accounts Receivable Written Off at June 30, 2016**

As authorized by a resolution passed by the Board of Visitors on August 13, 1976, the Vice President for Finance and Chief Financial Officer and the Assistant Vice President for Finance and University Controller periodically review the university's accounts and notes receivable. The review is performed to determine those delinquent accounts that are deemed to be uncollectible. Subsequently, the accounts are written off the university's records in accordance with generally accepted accounting practices. However, such accounts are not discharged or forgiven (with limited exceptions such as bankruptcies, death, etc.), and the university continues to track these accounts and sometimes collects portions of these accounts after being written off.

Normally, accounts are written off at the close of the fiscal year. For the fiscal year ended June 30, 2016, the accounts receivable written off totaled \$552,880. The decrease in write-off of \$681,951 over prior year is primarily the result of a decrease in Sponsored Program write offs compared to prior year. In the prior fiscal year, an extraordinary long term account for Prosper Financial, Inc. written off. See Attachment C for a summary of the accounts receivable written off at June 30, 2016, with comparative data for the two previous fiscal years.

For each accounts receivable written off, appropriate collection procedures were utilized. Further collection efforts were not justified for various reasons such as bankruptcies, the inability to locate the debtor, and the cost versus the benefit for small receivable amounts.

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<sup>1</sup> Operating revenue for FY15 of \$962,022,000 was used for this calculation.

As shown in Attachment D, the \$552,820 write-off total consists of 955 customers with an average account value of \$579. In fact, as shown on Attachment E, of the total number of accounts written off, 53.8 percent (514) were valued at less than \$100, and these low dollar accounts represent only 3.8 percent of the total dollar value of the write-offs.

### **Notes Receivable – From Students Written Off at June 30, 2016**

Additionally, the total of notes receivable written off at the close of the fiscal year included \$31,939 of the institutional student loan portfolio. Institutional student loans are subject to the same collection techniques as other university receivables. For each loan written off, appropriate collection procedures were utilized. The notes receivable write-off consists of nine loans, past due 900 or more days, with an average loan balance of \$3,549. Attachment F provides the composition of notes receivable at year end. The institutional student loans are most often awarded to students with financial need who have exhausted other avenues of financial aid. Since these are long-term loan programs, issued to borrowers with limited resources, generally we have allowed more time before deeming the loan uncollectible and writing these amounts off.

Federal notes receivable are issued from funds received from the federal Department of Education over many previous years for the Perkins and Health Professions Student Loan programs, and from required matching contributions from the university. Again the same collection procedures are followed for these loans. When these loans are deemed to be uncollectible Federal regulations require that Perkins loans be assigned and returned to the Department of Education for additional collection efforts and final resolution.

### **State Management Standards**

The university's Management Agreement under the Restructured Higher Education Financial and Administrative Operations Act includes several financial and administrative performance standards. The university must achieve compliance with all of these performance standards to retain the financial benefits provided under the Management Agreement. There are two management standards related to accounts receivable, and both are calculated annually. The two standards are:

- a. A four quarter average past due rate of 10 percent or less on receivables 121 days or more past due as a percentage of all receivables.
- b. An average past due rate of 10 percent or less on Federal student loans.

The university is currently in compliance with both standards. As of June 30, 2016, the average past due rate on current receivables 121 days or more past due is 1.12 percent for the four quarters ended and the Federal Perkins Student Loan default rate is 1.72 percent.

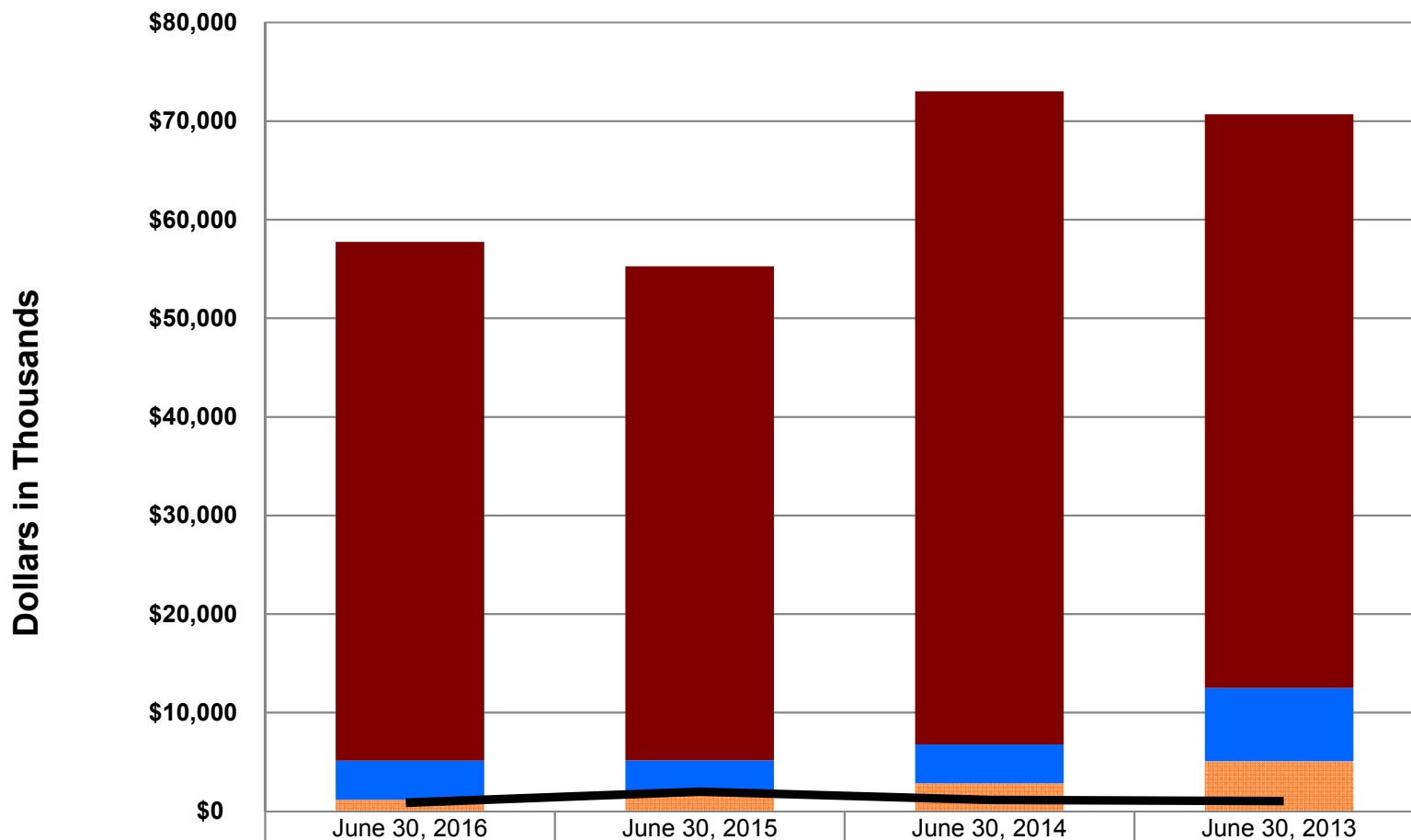
**Composition of Gross Accounts Receivable  
Compared to Same Quarter Previous Year  
(Dollars in Thousands)**

	<u>June 30, 2016</u>		<u>June 30, 2015</u>	
	Receivable Balance	Percent	Receivable Balance	Percent
Student Accounts	\$ 1,983	3.4%	\$ 2,194	4.0%
Sponsored Programs	44,295	76.7%	46,888	84.9%
Electric Service	921	1.6%	953	1.7%
Parking Service	88	0.2%	90	0.2%
Telecommunications (CNS)	12	0.0%	37	0.1%
CPE and IVTSCC <sup>1</sup>	398	0.7%	379	0.7%
Veterinary Medicine	409	0.7%	556	1.0%
Equine Medical Center	220	0.4%	191	0.3%
Short Term Loans/Notes	9	0.0%	26	0.0%
Other Receivables	9,403	16.3%	3,942	7.1%
<b>Total Gross Receivables</b>	<b>\$ 57,738</b>	<b>100.0%</b>	<b>\$ 55,256</b>	<b>100.0%</b>

<sup>1</sup> Continuing and Professional Education/Inn at VT and Skelton Conference Center



**Aging of Current Gross Accounts Receivable**  
**From June 30, 2013 to June 30, 2016**  
**(Dollars in Thousands)**



Receivables Not Past Due	\$52,618	\$50,117	\$66,239	\$58,190
1 - 120 Days Past Due	\$3,968	\$3,424	\$3,948	\$7,433
121 to Over 1 Year Past Due	\$1,152	\$1,715	\$2,824	\$5,060
Total Gross Receivables	\$57,738	\$55,256	\$73,011	\$70,683
Write-Offs	\$553	\$1,235	\$722	\$651

### Current Accounts Receivable Write-Offs for June 30, 2016 with Comparison to 2015 and 2014

<u>Accounts Receivable</u>	<u>June 30, 2016</u>	<u>June 30, 2015</u>	<u>June 30, 2014</u>	<u>Three Year Average</u>
Student Accounts	\$ 178,943	\$ 252,868	\$ 329,390	\$ 253,734
Sponsored Programs	138,611	771,259	220,764	376,878
Electric Service	16,726	12,777	17,041	15,515
Parking Services	16,616	21,338	20,741	19,565
Telecommunications (CNS)	74	92	13	60
CPE and IVTSCC <sup>1</sup>	939	1,284	187	803
Veterinary Medicine	126,105	107,779	81,524	105,136
Equine Medical Center	31,866	19,653	6,709	19,409
Short Term Loans/Notes	2,229	2,109	2,633	2,324
Other Receivables	<u>40,711</u>	<u>45,612</u>	<u>43,251</u>	<u>43,191</u>
<b>Total Current Accounts Receivable Write-Offs</b>	<b><u>\$ 552,820</u></b>	<b><u>\$ 1,234,771</u></b>	<b><u>\$ 722,253</u></b>	<b><u>\$ 836,615</u></b>

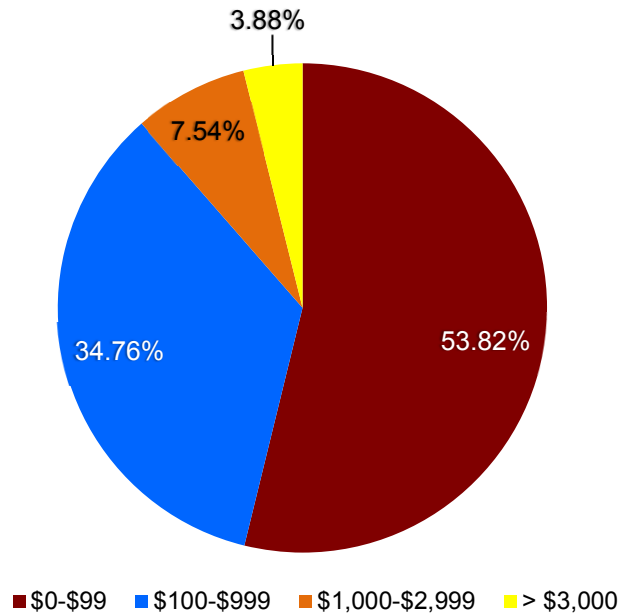
**Current Accounts Receivable Write-Off Summary for June 30, 2016**

<b>TYPE</b>	<b>Total Number of Accounts</b>	<b>Total Dollars</b>	<b>Average Write Off Amount (\$)</b>	<b>Percent of Total Dollar Value</b>	<b>Percent of Total Number of Accounts</b>
Student Accounts	80	\$ 178,943	\$ 2,237	32.37%	8.38%
Sponsored Programs	2	138,611	69,306	25.07%	0.21%
Electric Service	64	16,726	261	3.03%	6.70%
Parking Services	291	16,616	57	3.01%	30.47%
Telecommunications (CNS)	1	74	74	0.01%	0.10%
CPE and IVTSCC <sup>1</sup>	3	939	313	0.18%	0.32%
Veterinary Medicine	198	126,105	637	22.81%	20.73%
Equine Medical Center	14	31,866	2,276	5.76%	1.47%
Short Term Loans/Notes	5	2,229	446	0.40%	0.52%
Other Receivables	297	40,711	137	7.36%	31.10%
	<b>955</b>	<b>\$ 552,820</b>	<b>\$ 579</b>	<b>100.00%</b>	<b>100.00%</b>

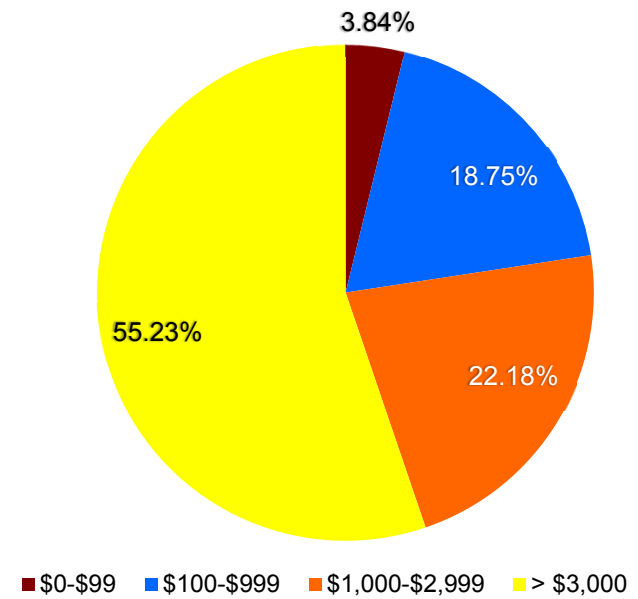
<sup>1</sup> Continuing and Professional Education/Inn at VT and Skelton Conference Center

### Stratification of Current Accounts Receivable Write-Offs for Fiscal Year 2016

Total Number of Accounts - 955



Total Dollar Value - \$552,820



**Composition of Total Federal and Institutional Student Notes Receivable  
Compared to Same Quarter Previous Year  
(Dollars in Thousands)**

	June 30, 2016		June 30, 2015		Increase/ Decrease
	Receivable Balance	Percent	Receivable Balance	Percent	
<b><u>Federal Loans</u></b>					
Federal - Perkins Loan	\$ 14,861	85.5%	\$ 14,211	86.1%	\$ 650 <sup>(2)</sup>
Federal - Health Professions Student Loan (HPSL)	593	3.4%	577	3.5%	16
	15,454	88.9%	14,788	89.6%	666
<b><u>Institutional Loans</u></b>					
Brookings Student Loan	\$ 1,610	9.2%	\$ 1,364	8.3%	\$ 246 <sup>(2)</sup>
Milks Student Loan	1	0.0%	1	0.0%	-
Horizons-Brookings Student Loan	80	0.5%	83	0.5%	(3)
Charles W Thomas Student Loan	172	1.0%	200	1.2%	(28)
Virginia Tech Carilion School of Medicine Student Loan (VTCSOM)	63	0.4%	67	0.4%	(4)
	1,926	11.1%	1,715	10.4%	211
<b>Total Federal &amp; Institutional Notes Receivables</b>	<b>\$ 17,380</b>	<b>100.0%</b>	<b>\$ 16,503</b>	<b>100.0%</b>	<b>\$ 877</b>

(1) The university implemented two institutional student loan programs in fall 2010 to provide student aid to the inaugural class of the Virginia Tech Carilion School of Medicine (VTCSOM) students.

(2) The increase in note receivables at year end is a result of loans awarded for the 2015-2016 academic year.

(3) The university is not currently awarding new loans for this program.

(4) The total for Institutional Loans is net of \$31,939 of write-offs for FY2016.

# **Increasing Administrative Efficiencies through Expansion of Automated Systems**

## **FINANCE AND AUDIT COMMITTEE**

**October 7, 2016**

### **Background**

A resolution was passed at the June 2008 meeting that charges the university's Vice President for Finance and Chief Financial Officer and the Vice President for Information Technology and Chief Information Officer to develop a plan to continue to automate the university's administrative systems utilizing modern information technology processes and security tools to gain process efficiencies. In addition, the plan should be implemented in a way that addresses business processes and the manner in which they are being conducted. Lastly, a timetable should be established for the ongoing automation of administrative processes in accordance with the plan to identify available resources such that the strategic systems improvements are implemented as soon as is practical to achieve administrative cost savings.

### **Report**

This report presents the most recent progress in the continued automation of administrative systems highlighting some of the efficiencies and process improvements that have been achieved since the November 2015 report. Following submission of the November 2009 report, the chair of the Finance and Audit Committee of the Board of Visitors and the Vice President for Finance and Chief Financial Officer agreed that this should become an annual report submitted at the November board meeting. In addition, it was agreed that the format of the report should change to only include a synopsis of the top four or five achievements from the previous year and to highlight the top four or five initiatives planned for next year. The university IT projects range from short-term automation projects to comprehensive, multi-year projects. To more effectively communicate these IT initiatives, the format of this report changed in 2014. The report was expanded to include a matrix that lists all of the programs and initiatives that are either ongoing or new in fiscal year 2016 with indicators for those completed and those estimated to be completed during the upcoming year.

### **Significant Achievements for 2016**

Virginia Tech continues to emphasize the importance of implementing automated systems to gain process efficiencies and steady progress is being made towards this goal. Six completed initiatives that will be highlighted in this report are new or enhanced systems for course registration, undergraduate student major changes, electronic

research administration, web content management, event scheduling, and implementation of an inbound freight program.

- **Course Registration:** As the first step in an overall upgrade for Virginia Tech ERP Banner applications, a new course registration application was deployed for the drop/add period for the Fall 2016 semester. Students used this system to drop 4,359 classes this fall. Users of the system report that the system is more intuitive than the previous course request system, they like the added functionalities, and they like the modern user interface and mobile device capability. The user interface uses responsive design principles which enable consistent user experience for both desktop and mobile devices. Improved course and section search capabilities and seeing the class schedule in a calendar view has simplified the registration process for creating a personalized schedule. The previous registration system required students to have the timetable of courses and the registration system open on separate screens. As of September 27, 2016, 440 add or drop transactions had been processed for the upcoming winter session. The registration software is the first Banner 9 module to be deployed at Virginia Tech.
- **Undergraduate Major Change:** Another systems improvement project targeted at improving administrative efficiencies related to student applications was the deployment of an automated undergraduate major change application. This new functionality replaces a paper process and is accessible through the familiar HokieSPA interface that students and employees use to view academic, financial, and other pertinent information about their relationship with Virginia Tech. When using the software, students select from a list of majors while minimum requirements to transfer into that major are displayed. Once selected academic department advisors can view and approve the major change from within the HokieSPA with one click as opposed to logging into Banner and processing the change manually as in the past. In conjunction with this software deployment on August 1, 2016, the business process for major changes was improved to allow major changes three times a year at common times instead of having varying deadlines within the different colleges and departments. Through September 27, 2016, 1,289 students had initiated a major change electronically using the new process.
- **Electronic Research Administration:** The electronic research administration system, Summit, is a comprehensive research administration system that is being developed by Virginia Tech as a customized solution for Virginia Tech research needs that will address efficiencies throughout the research administration life cycle from proposals to awards. At the beginning of the 2016-17 academic year, systems for proposal development, online proposal routing and approval, and online conflict of interest (COI) management were deployed. These systems

enable faculty to prepare, store, and retrieve proposal information online and electronically route the proposal for approval at various levels within the university administration.

The proposal development and routing and approval modules form the core for an online environment streamlining the administrative functions for research administration. The system supports the current volume of over 3,000 proposals a year and positions Virginia Tech to need fewer additional resources as proposal development and submission rates rise. Faculty and their administrative staffs are investing less time and experiencing an improvement in the quality of the proposals because the system provides a single point of access to a central repository of data, documents, and communication throughout the life cycle of the proposal. This time savings is even more prevalent in multidisciplinary proposal development cases where multiple principle investigators are collaborating on the same proposal. This is a significant improvement over previous processes that used paper, email and other disconnected document management practices.

The COI system completely replaces a paper based system creating a user environment that simplifies the process for faculty to declare possible conflicts of interests, and facilitates management review and approval of potential faculty COI activities. The automated process also enables improved data reporting and data sharing which limits both faculty and institutional risk. The automated system meets a critical business control responsibility and satisfies prior audit comments. All three systems have an easy to navigate user interface, are supported by on-line tutorials and video guides, and have been very well received by faculty and staff.

Summit represents an important milestone for Virginia Tech in modern software development and deployment methodologies. Summit is implemented in “the cloud,” being built on Amazon Web Service infrastructure-as-a-service offerings, rather than being built on servers in our own data center. This provided the project with faster deployment and can quickly scale up or down to align with changes in demand.

- **Content Management:** In March 2016, the university launched a new enterprise content management system (CMS), powered by Adobe Experience Manager (AEM). AEM allows content creators from throughout the university to create content once and publish it everywhere, thus reducing the need to duplicate efforts by publishing the same content in different systems. The software enables website contributors to update their web content without being burdened by the technical



details of creating, editing, and maintaining websites. This new system features a more intuitive interface, faster processing, and a series of templates that create consistency while making the content more accessible from desktops, laptops, tablets, phones, and other devices. It is expected that more than 300 university sites will migrate to this new platform by the end of this year. Sites that are already publishing out of new system include Virginia Tech homepage, Virginia Tech News, the Office of the President, Office of the Executive Vice President and Provost, the College of Agriculture and Life Sciences, and top-level administrative pages.

- **Event Management:** The university has deployed CollegeNet's 25Live as a service application that enables event planners and academic schedulers to search dates and venues and schedule campus space and resources through a web-based platform. The software service enables automated posting of scheduled events to electronic calendars and displays across campus. A comprehensive view of all events at a particular time and location is valuable for police and emergency managers as well as event planners and facility managers. This software can produce reporting and statistics on facility usage which will help demonstrate the university's efforts to promote the year round use of physical facilities.
- **Inbound Freight Program:** Every day the university receives deliveries of product where the cost of shipping has not been previously negotiated, otherwise known as prepay-and-add freight. On these deliveries, suppliers typically charge the university carrier list price and are realizing a significant profit by marking up the shipping charges. To reduce these shipping charges and standardize to a preferred inbound freight carrier, the university implemented an inbound freight savings program in September 2016. This initiative is a partnership between the university, Vantage Point Logistics (VPL) and Federal Express (FedEx). VPL works with suppliers to utilize the university's heavily discounted FedEx rates when shipping products and is expected to result in a 35% saving on the average prepay-and-add freight charge. This initiative required system integration efforts in the background, but was transparent to university departments who continued to place orders through the eProcurement system in the same manner as they always have. The program successfully launched in September and is in a ramp up period of converting shipping accounts to this new method. To facilitate the implementation, Virginia Tech created a seamless electronic communication of daily purchase order details to Vantage Point Logistics and implemented a backend electronic invoicing system from VPL that accurately allocates freight charges to the correct purchase order and funding source.

In addition to these completed initiatives, Virginia Tech continues to work on two broad projects with multi-year implementation timelines.

- **Upgrade to Banner 9 (University Enterprise Resource Planning system):** Enterprise administrative applications tend to change slowly for a few years, and then make larger leaps in response to accumulated needs. Ellucian, the provider of Banner, has announced a new version of its offerings for enterprise administrative finance, student, and human resource applications. “Banner 9” provides an improved web-based user interface with a more mobile-friendly look and feel. The software is being re-architected to use modern industry standard technology. Over the last 18 months, Virginia Tech has served as one of a small number of institutions across the country piloting and testing the initial releases of Banner 9. In 2016, significant progress has been made laying the foundation needed to install the administrative applications for the human resources, student, and finance modules of Banner. In August 2016, the first Banner 9 application for Student Course Registration was delivered to the campus as reported above.
- **Advancement System:** Virginia Tech and the Virginia Tech Foundation have undertaken a project to implement a new constituent relationship management system that is designed around advancement industry best practices and will serve as a tool to support more strategic, data-driven fundraising, alumni relations, and engagement efforts. The technology being implemented is Blackbaud CRM, which was purchased by the Virginia Tech Foundation in December 2014. Blackbaud CRM will replace Banner Advancement, which has been used by University Development and the Alumni Association at VT since 1998. Banner Advancement is not positioned to provide critical functionality or the needed flexibility and agility to support evolving fundraising and engagement strategies. Blackbaud CRM will be designed to support the future direction of the Advancement Division. The system combines online applications, actionable prospect research and analytics with multi-channel direct marketing in one platform to enable an integrated view of the constituent experience across the organization. The project remains on schedule for a July 1, 2017 deployment.

A matrix of significant completed and ongoing projects is provided on page 5 and 6 of the report. Finally, Attachment A provides a detailed description for each program and initiative, the status from last year’s report, significant accomplishments from the previous year, and the status of the project as of this report.

Initiatives for Increasing Administrative Efficiencies through Expansion of Automated Systems						
Initiative	Description	Beginning		Completion		
		Prior to 2016	In 2016	By 10/2016	Est. by 10/2017	Ongoing
Division of Information Technology: University Data Initiative Program						
1	Self Service Business Intelligence	Creation of self-service BI training and collaboration modules to enable users to access and query data effectively.	X			X
2	Information Governance	Evaluation of information access policies and procedures and recommendations to promote successful BI deployment.	X			X
Division of Information Technology: Upgrade to Banner 9						
3	Banner 9 Upgrade	Implement newest release of Ellucian's Enterprise Resource Planning (ERP) Software.	X			X
Research: Electronic Research Administration Program						
4	Proposal Development and Submission	Develop system module for routing, communications, and approvals for proposal development and submission.	X		X	
5	Conflict of Interest Management	Develop system for tracking declarations of possible conflicts of interest		X	X	

Initiatives for Increasing Administrative Efficiencies through Expansion of Automated Systems							
Initiative	Description	Beginning		Completion			
		Prior to 2016	In 2016	By 10/2016	Est. by 10/2017	Ongoing	
Finance							
6	Effort Reporting	Implementation of automated solution for completion and approval of Personnel Activity Reports for effort certification.	X				X
7	Cardinal Migration	Migration to the new Commonwealth of Virginia financial reporting system	X		X		
8	Inbound Freight Program	Implement Vantage Point Logistics system to manage inbound Federal Express freight charges with vendors on VT procurements resulting in reduced cost on university procurements		X	X		
9	Dining Invoices	Replacement for the existing in-house Dining Services invoice processing system to provide automation for the processing of US Foods invoices into the Banner Accounts Payable module		X		X	
Human Resources/Payroll							
10	Leave System	The next phase of the leave system project provides processing and management of paid overtime including better integration with the payroll system		X		X	
Provost and VP for Administration							
11	Event Management	System implementation for scheduling and managing university and academic events.	X		X		

Initiatives for Increasing Administrative Efficiencies through Expansion of Automated Systems						
Initiative	Description	Beginning		Completion		
		Prior to 2016	In 2016	By 10/2016	Est. by 10/2017	Ongoing
Advancement						
12	Blackbaud Constituent Relationship Management System	Implementation of Blackbaud constituent relationship management system	X			X
13	Web Content Management Solution	Implement Adobe Experience Manager (AEM) as a web content management solution for site management, standard branding, and content creation and publication for most VT departmental websites as well as the VT homepage, VTnews, and the daily VT email	X		X	
Provost						
14	Faculty Activities Data Management System	Electronic faculty activity system for promotion and tenure, annual reporting, and accreditation documentation.	X			X
15	EAB Student Success Collaborative	Implement the EAB Student Success Collaborative hosted software solution as a service application that uses data and analytics to measurably improve student outcomes		X		X
16	Undergraduate Major Change	Add functionality to HokieSPA to automate the paper process of changing a student's primary major		X	X	

Initiatives for Increasing Administrative Efficiencies through Expansion of Automated Systems						
Initiative	Description	Beginning		Completion		
		Prior to 2016	In 2016	By 10/2016	Est. by 10/2017	Ongoing
Student Affairs						
17	Sunapsis International Students system		X		X	
18	StarRez Housing System		X		X	

## ***Appendix A. Summary of IT Programs and Initiatives***

### Division of Information Technology: University Data Initiative Program

Business intelligence is a broad category of applications and technologies for gathering, storing, analyzing, and providing access to data to help users make better data-driven decisions. The increasingly rapid expansion of institutional data and the rising demand for accessible means to analyze these data have created a pressing need to address Virginia Tech's current business intelligence capabilities. As a result of these more sophisticated data needs, Virginia Tech has undertaken a University Data Initiative (UDI) Program to implement a Business Intelligence System (BIS) and new self-service business intelligence functionality that leverages the existing VT data warehouse in combination with Ellucian Banner Enterprise Resource Planning (ERP) system data and data from other systems. The system is also intended to replace outdated software that is currently used for the scheduling and distribution of reports.

#### *Status from November 2015*

The self-service business intelligence project is well underway. One of the goals of this effort is to enhance end users' ability to self-serve their reporting needs. The foundational work in this project was the creation of data models for our existing data marts. Data model creation turned out to be more difficult and time consuming than originally projected. The finance data model is complete and data models for human resource and student data are nearing completion. The structure for assessing financial reports has been created and the three most frequently used reports from the old system have been generated in the new tool and deployed to a pilot group for testing. The rest of the existing financial reports will be deployed during FY2016. Training to teach "power users" how to use the tool to write their own reports using the finance model is scheduled for the fall semester.

The information governance team completed a survey and made recommendations to the steering team in the spring semester. The steering team reviewed this information and submitted a recommendation to senior management for consider sponsoring a project to address improvements in information access and provisioning.

#### *Status as of November 2016*

Ad-hoc report and dashboard creation was transferred from the legacy tool, Oracle Enterprise Performance Management System, to the MicroStrategy Business Intelligence System. This transition helped eliminate the IT security concerns of the legacy system while providing enhanced business intelligence capabilities to the user community. To continue to promote data proficiency with MicroStrategy, the Vice President for Finance unit dedicated a full-time resource last year to improving end users' ability to self-serve their reporting needs. The Office of Institutional Research and Effectiveness is exploring the visualization capabilities of MicroStrategy to provide information that supports and

strengthens decision making and planning processes for the administration of the university.

As Virginia Tech looks to the future, access to data for strategic planning, incentive-based budgeting, decision making, and assessment is increasingly critical. The university is committed to advancing its capabilities in data access and analytics, while maintaining privacy, security, and compliance. Virginia Tech is in the process of defining and recruiting a new leadership position to work across academic and administrative units to realize the data, processes, capabilities, and tools that Virginia Tech needs to be a more data-driven institution.

### Research: Electronic Research Administration Program

The electronic research administration system is a comprehensive research administration system that is being developed by Virginia Tech as a customized solution for Virginia Tech research needs that will address efficiencies throughout the research administration life cycle from proposals to awards.

#### *Status from November 2015*

The Office of Sponsored Programs (OSP) began full management of all new proposals in Summit in May 2015, including management of document versions and communication between the Principal Investigator and OSP. Over 1,800 proposals, approximately half the projected annual volume, have been entered in the system so far. This has reduced duplication of documents stored in systems, and increased the reliability of communication. The use of a central system has also enabled more effective use of personnel by providing a consistent administrative system that enables workflow assignment. Training efficiencies have been achieved and there is an increase in the consistency and quality of customer service. In October, Principal Investigators began piloting the system enabling direct communication with OSP. A pilot to automate routing and approval of proposals will begin December 2015.

#### *Status as of November 2016*

At the beginning of the 2016-17 academic year, systems for proposal development, online proposal routing and approval, and an online conflict of interest (COI) management were deployed. The three systems, which are the result of a collaborative effort between the Office of Research and Innovation and the Division of Information Technology, enable faculty to prepare, store and retrieve information online and electronically route information for approval at various levels within the university administration. The proposal development and routing and approval modules form the core for an online environment where many of the administrative functions for research administration can be conducted. The system supports the current volume of over 3,000 proposals a year and positions Virginia Tech to need fewer resources as proposal rates rise. Faculty and their administrative staffs are investing less time and seeing improvement in the quality of their proposals developed because the system provides a single point of access to a central repository of data,



documents, and communication throughout the life cycle of the proposal. This time savings is even more prevalent in multidisciplinary cases when multiple principle investigators are collaborating on the same proposal. This is a significant improvement over previous processes that used paper, email and other disconnected document management practices. The COI system completely replaces a paper based system creating a user environment that makes it easy for faculty to declare possible conflicts of interests, and for management to approve faculty activities. An automated process also enables improved data reporting and data sharing which limits both faculty and institutional risk. The automated system meets a critical business control responsibility and satisfies prior audit comments. All three systems have an easy to navigate user interface, are supported by on-line tutorials and video guides, and have been very well received by faculty and staff. At this time, this phase of the project is considered complete.

### Finance: Effort Reporting

The university receives significant funding for sponsored projects from federal and state agencies, private foundations, organizations, and industry. Proper effort certification verifies that these funds are properly expended for salaries and wages of faculty, staff, and students who work on these projects. The Personnel Activity Report (PAR) documents the allocation of departmental funds between direct activities (such as instruction, research, public service, other) and indirect activities like departmental administration. The information is a vital component of the university's facilities and administrative cost proposal. The university plans to replace its current paper-based system with an automated solution for completing PAR documents. The result of this project should be a more secure, efficient process that results in significant cost savings by eliminating the need for creation, duplication, and storage of paper documents.

### *Status from November 2015*

This effort is awaiting the results of the alternative effort reporting processes to meet the federal effort certification requirement under the new federal regulations. The Inspector Generals of several federal agencies will be reviewing these alternatives and issuing reports as to their effectiveness. Once these alternatives have been evaluated by the Office of the Inspector General, management will decide how to proceed and initiate a project.

### *Status as of November 2016*

Internal Audit conducted an audit of the effort reporting process in the spring of 2016 that determined university management has designed and implemented controls that are effective at reducing exposure to the business risks faced. The audit report stated that efficiencies may be realized from a carefully planned and implemented automated effort reporting process; however, there is very limited capacity for existing technical staff and functional staff resources given the scope of existing and anticipated high-priority projects.

A committee to review solutions for automating effort reporting has been formed. The committee's charge is to evaluate the current Banner effort reporting module, perform an analysis of alternative systems, study the feasibility of developing a custom solution in-house and to estimate the resources (both dollars and hours) required for each alternative. The results of this work will be presented to the Vice President for Finance and Chief Financial Officer, Vice President for Information Technology and Chief Information Officer, and Vice President for Research and Innovation by the end of the calendar year 2016. With these findings, university leadership will be better positioned to assess the priority of the automation of effort reporting given the numerous projects currently underway and already planned for the future.

#### Finance: Cardinal Migration

The Cardinal project is an effort by the Commonwealth of Virginia to modernize the state's financial management systems. This effort replaces the COBOL based Commonwealth Accounting and Reporting System (CARS) which was created by the Department of Accounts in the 1970's. While there is little to no benefit to Virginia Tech, the university must comply with this state mandate to interface financial data to this new state system.

#### *Status from November 2015*

The university is on track to be prepared when the state migrates away from CARS to Cardinal which is currently scheduled to happen on February 1, 2016.

#### *Status as of November 2016*

This project was completed in February 2016.

#### Finance: Inbound Freight Program

Every day the university receives deliveries of product where the cost of shipping has not been previously negotiated, otherwise known as prepay-and-add freight. On these deliveries, suppliers typically charge the university carrier list price and are realizing a significant profit by marking up the shipping charges. To reduce these shipping charges and standardize to a preferred inbound freight carrier, the university desires to implement an inbound freight savings program in September 2016. This initiative is a partnership between the university, Vantage Point Logistics (VPL) and Federal Express (FedEx). VPL works with suppliers to utilize the university's heavily discounted FedEx rates when shipping products and is expected to result in a 35% saving on the average prepay-and-add freight charge.

#### *Status from November 2015*

Project started in 2016.

### *Status as of November 2016*

The program successfully launched in September and is in a ramp up period of converting shipping accounts to this new method. To facilitate the implementation, work was provided by the division of information technology to create a seamless electronic communication of daily purchase order details to Vantage Point Logistics and also to implement a backend electronic invoicing system from VPL that accurately allocates freight charges to the correct purchase order and funding source. While this initiative required system integration efforts, it was transparent to university departments who will continue to place orders through the eProcurement system in the same manner as they always have. At this time, this project is considered complete.

### Finance: Dining Invoices

Improve the existing in-house invoice processing system used by Dining Services to process US Foods invoices into the Banner Accounts Payable module. The new system will reduce the effort required by the Accounts Payable office personnel to process US Foods invoices and provide expedited financial processing for Dining Services.

### *Status from November 2015*

Project started in 2016.

### *Status as of November 2016*

The systems development work on this project has been completed and the project is in the user acceptance testing phase. It should be noted that reusable Java code libraries have been created that have been utilized in both this project and the Inbound Freight project noted above. This highlights technical efficiencies gained through agile development processes and object oriented development. It is anticipated this work will be completed early in calendar year 2017.

### Human Resources/Payroll: Leave System

Every month, Virginia Tech employees are responsible for accurately reporting leave usage. By January 2016, the university completed phase one of enhancements to the Leave Entry and Reporting System to enable the electronic routing, storage, and approval of leave reports. In addition to leave reporting, salaried non-exempt employees will be able to use the enhanced leave system to report non-exempt hours worked, replacing the current paper-based process. The university expects to realize a more secure and efficient process that results in significant cost savings by eliminating the need for creation, duplication, and storage of paper documents through implementation of this project.

### *Status from November 2015*

Every month, approximately 5,100 Virginia Tech employees are responsible for accurately reporting leave usage. In the summer of 2016 the university began a phased implementation of a system which enables the electronic routing and approval of leave usage in lieu of requiring a signature on a paper document. Almost 2,500 of these employees who report leave are eligible for overtime. Use of the new system will result in fewer overtime calculation errors as well as replacing the need for signatures on a monthly paper-based Leave and Hours Worked document. By January of 2016, all employees will be using the new system. This enhancement should result in significant cost savings by eliminating the need for creation, duplication, and storage of more than 90,000 paper documents annually. The interface for the system is optimized for mobile device usage.

*Status as of November 2016*

Phase one of the leave system was completed as scheduled in January 2016. Upon completion of this phase, phase two of the project to expand the leave system to provide processing and management of paid overtime and further integration with the university's payroll system began. Tighter integration between the time clock system and the leave system has eliminated duplicative entry of hours for nonexempt employees. The development effort to adapt the leave interface to facilitate bi-monthly entry and approval of time entered to systematically calculate overtime has been completed. Human Resources and the Payroll Office will be testing this functionality over the next few months prior to launching a pilot phase implementation in January 2017. Rollout of this functionality to the rest of campus is expecting during the first half of 2017. Planning efforts have begun for the next phase of the project which deliver a needed technology upgrade for Human Resource leave administration functions by migrating these functions to the new leave system.

#### Provost and VP for Administration: Event Management

Currently events are facilitated by a myriad of offices and managed through many disparate business practices across the campus ranging from departmental electronic systems to spreadsheets. Improving the coordination and standardization of event management is needed to insure consistent compliance with university health and safety processes and to provide greater transparency for events, group activities, and campus usage. It is envisioned that this solution will reduce administrative time and cost while enhancing the university's ability to promote, secure, and coordinate campus events. In addition, the system will provide better information and analytical tools for supporting the year-round campus utilization goals of the Virginia Higher Education Act of 2011. The university-wide implementation should enable improved services to students and organizations while also optimizing the use of university space.

*Status from November 2015*

Utilization of 25Live continues to increase as additional events are managed through the system. In addition, the initial activities of the Schedule25 project for academic scheduling have begun with process analysis and data loads.

### *Status as of November 2016*

The university plans to implement the CollegeNet Series25 system which includes 25Live for event scheduling, Schedule25 for academic scheduling, and X25 for web-based space master planning and utilization. This year the implementation began with the 25Live event scheduling. Initial events processed through the system included some of the summer camps and conferences held on the Blacksburg campus. The system was utilized to manage compliance requirements for the events and to provide coordinated information to campus offices. Additional units on campus are now using 25Live to schedule events on campus and a new import utility from CollegeNet is being tested so events scheduled using other software can be loaded into 25Live for more comprehensive reporting.

CollegeNet's Series25 system has been deployed for academic scheduling and was used exclusively for spring 2017 classroom scheduling. The system allows multiple what-if scenarios and iterations of classroom scheduling to create the highest placement of classes and utilization of classroom spaces. It also provides automated scheduling for exams and the Registrar's Office was able to successfully replace a time-consuming manual process for spring 2017 exam scheduling with this tool.

Staff from stakeholder offices including the Vice Provost for Resource Management and Institutional Effectiveness, the University Registrar and the Associate Registrar for Scheduling & Governance have been trained to use X25. These areas have begun using the multitude of reports and graphs provided by the system for space utilization analytical reporting and planning.

### Advancement: Blackbaud CRM (Constituent Relationship Management System)

Virginia Tech and the Virginia Tech Foundation have undertaken a project to implement a new constituent relationship management system that is designed around advancement industry best practices and will serve as a tool to support more strategic, data-driven fundraising, alumni relations, and engagement efforts. The technology being implemented is Blackbaud CRM, which was purchased by the Virginia Tech Foundation in December 2015. Blackbaud CRM will replace Banner Advancement, which has been used by University Development and the Alumni Association at VT since 1998. Banner Advancement is not positioned to provide critical functionality or the needed flexibility and agility to support evolving fundraising and engagement strategies. Blackbaud CRM will be designed to support the future direction of the Advancement Division. The system combines online applications, actionable prospect research and analytics with multi-channel direct marketing in one platform to enable an integrated view of the constituent experience across the organization.

### *Status from November 2015*

The project plan is on target and on budget for the planned implementation by summer 2017. Moran Consulting has been hired to provide Independent Validation and Verification (IV&V) for the project. The initial IV&V visit has been scheduled for November 2015. Virginia Tech has begun working with Blackbaud consultants for planning and designing required integration with other systems.

*Status as of November 2016*

The system was purchased in January 2016 and the university began working with Blackbaud to develop an implementation plan. The system implementation portion of the project began in June 2016. The project plan is divided into a planning phase, design phase, testing phase, and implementation phase. The university has completed the planning phase as well as the first two design sessions. The remainder of the design phase is now in progress. The initial data loads from the legacy system into Blackbaud CRM have begun with data mapping and data cleanup in progress. The project remains on target for deployment by summer 2017.

Advancement: Athletic Fund Raising System

Virginia Tech Athletics Fund (VTAF) requires a new system to support the changes to the annual giving program for athletics that will come into effect in 2017. Delivery of an entire annual giving/per seat donation software solution using the Paciolan Advantage and online giving capability. The new software will give fundraisers the capability of analyzing and reporting on data by segment and ticket locations, donation amounts, demographics, and priority rankings. Donors will have online access to make contributions, set up payment plans, view their athletics giving history, ticket history, priority points and manage their interaction with athletics.

*Status from November 2015*

Project started in 2016.

*Status as of November 2016*

The technology infrastructure has been purchased, the project implementation planning document has been constructed and programming work on the system has been initiated. The project is targeted to go into production in November 2016.

Provost: Faculty Activities Data Management System

Virginia Tech is implementing an electronic faculty activity reporting system to automate the production of annual faculty activity reports and other types of reports about faculty activities and accomplishments. The system will be used to manage faculty activities information in the domains of learning, discovery, and engagement derived from existing university data systems, external public and commercial databases, and manual data entry. System functionality includes individual and unit level annual reporting and

accreditation documentation, populating websites, and a searchable expertise database. Once the system is fully implemented, it will be used to produce promotion and tenure dossiers and CVs for individual faculty members as well as department, college, and university level reports.

*Status from November 2015*

The College of Business and the College of Veterinary Medicine are beginning pilots of the system in the fall 2015. Expanded pilots are planned for spring 2016. Training and engagement activities for the system are major focuses during the pilot adoptions.

*Status as of November 2016*

Significant progress has been made over the year to get publication and teaching data as well as scholarly and service activities from a variety of existing data sources imported into the system. University wide training of faculty on the new system began this fall, and faculty will use the system for the first time for their 2016 annual activity reports. The university will continue to make adjustments to the system and develop reports to address various university data needs, but anticipates that the system will be fully implemented by the end of the 2016-17 academic year.