

Review and Approval of the Fiscal Year 2016-17 Internal Audit Plan

FINANCE AND AUDIT COMMITTEE

August 29, 2016

University Internal Audit presents the Fiscal Year 2016-17 Internal Audit Plan to the Finance and Audit Committee for final review and approval. An annual risk assessment was conducted to identify the entities that should receive audit attention in fiscal year 2016-17 and a core audit plan was developed.

For fiscal year 2016-17, approximately 30 audit projects are proposed, with 74 percent of University Internal Audit's available resources committed to the completion of planned projects. A description of each project is provided within the audit plan. University Internal Audit's goal will be to complete 85 percent of the audit plan. The internal audit plan may be modified based on the external audit environment or changes in regulations, management, or resources.

RECOMMENDATION:

That the Fiscal Year 2016-17 Internal Audit Plan be approved by the Finance and Audit Committee.

August 29, 2016

Virginia Tech

University Internal Audit

Fiscal Year 2016-17 Internal Audit Plan

August 29, 2016

OVERVIEW

University Internal Audit conducts risk-based assurance engagements, compliance reviews, management advisory services, and investigations. The risk-based assurance engagement is an objective examination of evidence to provide an independent assessment of governance, risk management, and the control systems within the university. The objective of the compliance review is to ensure all senior management areas (even low risk) receive periodic reviews from University Internal Audit every five years to perform tests of compliance with major university business policies at a minimum. The nature and scope of management advisory service activities, developed through agreement with the client, add value and improve the university's governance, risk management, and control processes without the internal auditor assuming management responsibility.

RISK ASSESSMENT PROCESS

University Internal Audit leadership conducted an annual risk assessment to identify the entities that should receive audit attention in fiscal year 2016-17. University departments and administrative operations were grouped into approximately 175 auditable entities or responsibility centers based on common missions and the existing organizational structure.

For each auditable entity, University Internal Audit reviewed financial data, including expenditures, revenues, cash receipts, federal contracts and grants, and the total number of employees. The relative business risk was assessed on a judgmental basis for the following qualitative and quantitative factors.

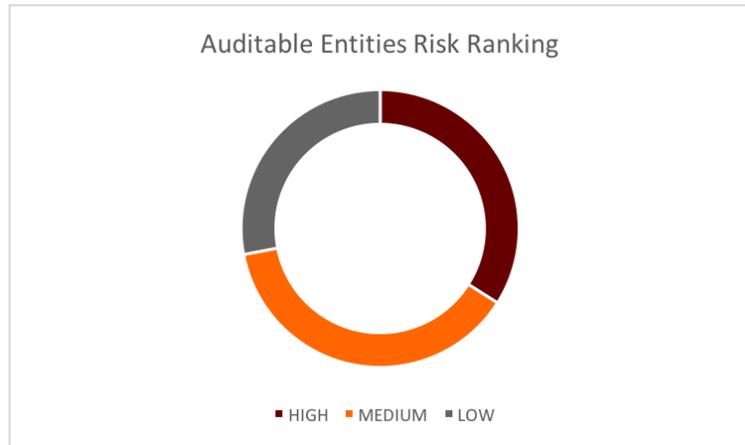
Factors
Quality and Stability of Control Environment
Business Exposure (Materiality and Liquidity of Operational Resources)
Public and Political Sensitivity
Compliance Requirements
Information Technology and Management Reporting

Elements considered within these factors included:

- Management's awareness of internal controls;
- Stability and expertise of management;
- Interval since the last audit review;
- Complexity of operations and technology applications;
- Materiality or financial impact to the university;
- Potential impact to reputation;
- Impact of noncompliance with internal and external policy, procedure, regulatory, and statutory requirements; and

- Reliance on information and management reporting for operating decisions, monitoring performance, providing services, and allocating resources.

The chart depicts the results of the risk assessment classifications. The risk assessment results were consistent with previous risk assessments conducted by University Internal Audit.



INFORMATION TECHNOLOGY RISK ASSESSMENT

University Internal Audit has also created a university-wide information technology (IT) risk-based audit plan mapped to the ISO 27002 standard, a best practice for developing and maintaining enterprise-wide IT security also references by university policies. University Internal Audit consulted with key IT personnel to ensure that audit coverage is maximized and properly targeted. The assessment of IT and business operations at the university identified four high-level risk domains intended to encapsulate the vast majority of the systems and computing environments within the university as follows:

- Student Systems;
- Finance and Administrative Systems;
- Human Resources Systems; and
- Research Systems.

The IT audit approach includes a variety of topical audits to gain a better understanding of the university-wide environment instead of narrowly focusing on the performance of individual departments. This approach also allows University Internal Audit to maintain current knowledge of the IT security and operating conditions in a dynamic industry through the constant evaluation and reassessment of planned audit engagements.

CORE AUDIT PLAN

University Internal Audit has identified certain critical areas for inclusion in the core audit plan to ensure that adequate coverage is provided over a reasonable time. To obtain additional insight and validate the plan, one-on-one discussions were conducted with senior leadership to identify reputation factors, regulatory changes, organization shifts, new initiatives, and deployment of new systems or technology tools.

The critical areas for core audit plan inclusion are:

- Academic Units
- Auxiliary Enterprises and Athletics
- Campus Safety and Security
- Enrollment Services
- Facilities and Operations
- Financial Management
- Human Resources
- Information Technology
- Off-Campus Locations
- Research
- Student Services

The core audit plan includes several multi-year audits that will allow for annual reviews of selected components of the entities with high external compliance risk and complex operations. These entities are University Scholarships and Financial Aid, Research, Human Resources, and Intercollegiate Athletics.

FISCAL YEAR 2016-17 AUDIT PLAN

The audit plan focuses on delivering value to Virginia Tech with an emphasis on the follow risk areas: strategic, operational, financial, compliance, and IT. If new topics emerge during the audit plan period that require more immediate attention, reconfiguration of the plan can be undertaken to accommodate these changes. University Internal Audit's goal is to complete 85 percent of the audit plan. As each audit is undertaken, risks will be re-evaluated to ensure proper audit coverage with consideration of confidentiality, integrity, and availability. Annual expenditures and revenues referenced below reflect fiscal year 2014-15 data unless otherwise noted.

Risk-Based Assurance

Planned Engagement	Overview	Risk Area
Athletics NCAA – Recruiting *	The Department of Athletics (Athletics), with 22 varsity sports at the NCAA Division I level, monitors more than 550 student-athletes each academic year. Athletics had operating revenues of approximately \$78 million and total operating expenses of approximately \$77 million. University Internal Audit conducts a complete audit of Athletics over a five-year period. This audit will include reviews of recruiting; institutional control; and awards, benefits, and expenses.	Compliance
Biochemistry	Biochemistry is the branch of the life sciences devoted to the identification and analysis of the structure, function, and mechanisms of action of the molecules of life. With more than 600 undergraduate Biochemistry majors, this program is one of the largest B.S. granting programs in the nation. Total expenditures for the department were \$8.4 million, with sponsored research totaling nearly \$4 million, a figure that represents 14% growth since 2010.	Operational – Academic
Compliance Program Assessment	The university, with its significant footprint in terms of the breadth of operations, research, and human resources, is subject to dynamic and expansive compliance requirements. Various compliance functions operate in a distributed manner with various entities responsible for topical compliance, including NCAA, Title IX, export control, human and animal	Compliance

Planned Engagement	Overview	Risk Area
	subjects, and safety and security, among many other topics. An effective compliance program ensures that the requirements of Federal Sentencing Guidelines are met, including periodically performing risk assessments and taking appropriate steps to reduce the risk identified through this process.	
Controller's Office – Fixed Assets	The Fixed Assets and Equipment Inventory Services (FAEIS) section of the Controller's Office is responsible for maintaining and managing the university's official fixed assets system that includes land, buildings, improvements, and both fixed and moveable equipment. Ongoing moveable equipment inventories are conducted to meet state and federal regulations. In addition, FAEIS provides institutional reporting services to the university, the Commonwealth, and other regional and national agencies, including federal sponsors.	Financial
Dining Services	Dining Services manages nine dining centers and is the largest single department on campus with over 2,300 employees in 2015. The award winning and nationally recognized unit serves approximately 7.1 million meals per year and manages approximately 19,000 dining plan holders with debit-style plans that can be used in any of the dining centers. Dining Services expenditures equaled almost \$52 million and total revenue equaled \$58.6 million, comprised of \$6.3 million in cash receipts.	Operational – Student
Emergency Preparedness	The Office of Emergency Management, within the Division of Administrative Services, coordinates planning, training, response, and recovery efforts to ensure the emergency readiness of the Virginia Tech community. The office oversees more than 220 departmental continuity of operations plans, public information and communication capabilities, regular drills and exercises, resource management, hazard mitigation, and coordination of internal and external stakeholders. The office's efforts led to Virginia Tech's recognition in 2014 as the first college or university accredited by the Emergency Management Accreditation Program.	Operational – Safety
Geosciences	The Department of Geosciences, awarding degrees at the university since 1907, focuses on research, education, and outreach dealing with the nature of the earth. Students and faculty investigate earth processes at scales ranging from atomic to planetary. Expenditures for the department totaled \$8.8 million, with sponsored research totaling just over \$2.7 million.	Operational – Academic
Global Activities	The university's emphasis on efforts to further develop its global presence presents distinct opportunities and challenges. Global operations can pose significant risks related to immigration compliance, economic and tax implications, fraud and loss of funds, life safety, transportation and evacuation, and reputational concerns, among others. Previously issued presidential memoranda and university policies require completion of requisite forms and reports as well as notification of the appropriate offices in advance of global activities, particularly when students are involved.	Strategic
Human Resources: Benefits *	Human Resources administers the Commonwealth benefits program and provides benefit management and guidance for approximately 7,500 faculty and staff. The benefits program is an integral part of the university's employee compensation	Financial

Planned Engagement	Overview	Risk Area
	package and includes health insurance, leave, legal resources, retirement plans, tuition assistance, and workers' compensation.	
Investments and Debt Management	The Office of Investments and Debt Management oversees the financial assets of the university and the related Virginia Tech Foundation Inc. (VTF). Responsibilities include the investment oversight of the VTF endowment and life income programs along with the management, accounting, and reporting of various operating and short-term investment funds. The office also manages the comprehensive debt program for the university and other university-related corporations. The program includes securing debt financing for many of the capital projects located on campus and at the adjacent Corporate Research Center as well as maintaining compliance of all bond covenants.	Financial
Mining and Minerals Engineering	With the first engineering degree offered at the university to a "mining engineer" in 1885, the Department of Mining and Minerals Engineering has developed into a leading mining and minerals engineering program. In recent years, enrollment in both undergraduate and graduate programs has grown significantly. The department is home to two internationally recognized research centers: the Virginia Center for Coal and Energy Research and the Center for Advanced Separation Technologies. Department expenditures totaled nearly \$8.7 million, with sponsored research totaling approximately \$6.1 million, a figure that represents significant growth since 2010 when this figure was under \$400,000.	Operational – Academic
Physics	The Department of Physics offers degrees in physics, applied physics, industrial physics, and nuclear science and engineering, among others. Faculty members within the department have been recognized nationally and internationally for research in areas of particle and nuclear physics, condensed matter physics, biophysics, and astrophysics. Expenditures for the department exceeded \$11.2 million, with sponsored research nearing \$3.1 million. While the sponsored research portfolio has been stable since 2010, overall departmental expenditures have grown by 21% over that same period.	Operational – Academic
Research: High Performance Computing	Virginia Tech is continually advancing its portfolio of high-performance computing (HPC) services and strengthening its commitment to bring the advantages of high-performance computing and visualization to more fields of academic endeavor. Advanced Research Computing (ARC), a unit within the division of IT, provides centralized support for research computing by building, operating, and promoting the use of advanced cyberinfrastructure at Virginia Tech. ARC recently unveiled its newest HPC system, named NewRiver. This and other supercomputing resources are available to individuals and departments throughout the university.	Information Technology – Research
Research: Lab Safety *	Lab Safety requires the cultural commitment of faculty, staff, and students to proper procedures, training, and behavior. This is especially important at Virginia Tech where numerous teaching and research labs operate within the extensive overall research portfolio, where the university ranked 39 th in the most recent National Science Foundation (NSF) rankings with more than \$513 million in total research spending. Among its	Compliance – Safety

Planned Engagement	Overview	Risk Area
	Commonwealth peers, Virginia Tech maintains the largest research portfolio and is the only university ranking in the NSF top 50. Environmental Health and Safety works to create a safe work environment through the promotion of lab safety.	
Student Engagement and Campus Life	Student Engagement and Campus Life, a unit within the Division of Student Affairs, complements the academic program by providing a variety of activities, educational opportunities, programs, facilities, and services that enhance student development and enrich the quality of campus life. The university has three student centers: Squires Student Center, the Graduate Life Center at Donaldson Brown, and Johnston Student Center. Previously known as Student Centers and Activities, the unit had operating revenues of approximately \$13.8 million and total operating expenses of \$12.9 million.	Operational – Student
Travel and Employee Reimbursements	Travel, meal, and other employee reimbursement documents flow from university departments to the Controller's Office. While the Controller's Office reviews the requests and processes them for payment in accordance with federal, state, and university policy and procedures, significant responsibility still lies with the employee's department and supervisory structure to ensure good stewardship of public and other university funds. All reimbursements must be in accordance with the plan approved by the Internal Revenue Service to help ensure effective reimbursement without significant taxable income implications.	Financial
Undergraduate Admissions	The Office of Undergraduate Admissions strives to attract, recruit, and enroll a highly qualified, talented, and diverse student body in a manner that supports the university's well-being. The class of 2019 required processing of approximately 22,500 applicants, of which approximately 16,400 were offered admission and 6,500 ultimately accepted admission. These results reflect the increasingly positive university reputation and strategic initiatives related to enrollment growth.	Operational – Student
University Policies Review	The university maintains approximately 180 policies governing the various aspects of university operations including teaching and learning, research, administration, and outreach. These policies function as a key element in the university governance structure. Specific policy groups include Finance and Business, Human Resources, Facilities, Academics, Student Affairs, Development and University Relations, and Research. University-level policies require approval through a governance process intended to assure appropriate perspective and forethought on developing matters or as conditions change requiring policy revision.	Strategic
University Scholarships and Financial Aid *	The Office of University Scholarships and Financial Aid (USFA) is part of the Enrollment and Degree Management area. USFA supports the university's student access, enrollment, and retention goals by providing the financial means to encourage economic, social, cultural, and academic diversity in the student body. USFA provided or monitored approximately \$425 million in student financial assistance. A complete audit of USFA is performed over a four-year period. This review will include state and institutional programs and over-awards.	Compliance and Financial

Planned Engagement	Overview	Risk Area
Virginia Tech Carilion Research Institute	Located in Roanoke, the Virginia Tech Carilion Research Institute (VTCRI) combined with the Virginia Tech Carilion School of Medicine comprise the entity known as Virginia Tech Carilion (VTC). VTCRI leverages the university's world-class strength in basic sciences, bioinformatics, and engineering along with Carilion Clinic's highly experienced medical staff and rich history in medical education. VTC strives to improve human health and quality of life by providing leadership in medical education and biomedical and clinical research. Reporting to the Vice President for Health Sciences and Technology, VTCRI had expenditures of more than \$22 million, including more than \$9 million in sponsored research, representing growth of 35% and 59% respectively since 2012.	Operational – Research
Virginia Tech Police Department	The Virginia Tech Police Department is a full-service, nationally accredited police agency responsible for the well-being of more than 50,000 students, employees, and visitors at Virginia Tech, 24 hours a day. The department works closely with administrators, students, and employees to create and maintain a secure atmosphere, chairing the Threat Assessment team, leading the university's Clery Act compliance, and overseeing the Virginia Tech Rescue Squad. The department employs 50 full-time sworn police officers as well as more than a dozen security guards and Safe Ride officers.	Operational – Safety

* Entity receives an annual audit on different components of their operation.

Information Technology Assurance

Planned Engagement	Overview	Risk Area
IT: Governance and General Controls Review	Information Technology General Controls (ITGCs) apply to system components, processes, and data for the university. The objectives of ITGCs are to ensure the proper development and implementation of applications, as well as the integrity of programs, data files, and computer operations. Common ITGCs include logical access controls over infrastructure, applications, and data; computer operation controls; data center physical security controls; and IT governance.	Information Technology
IT: Network Security	Virginia Tech provides an extensive telecommunications and data network that accommodates tens of thousands of registered users connecting work and personal devices through wired, Wi-Fi, and virtual private network connections. Additionally, the university operates a Restricted/Limited Access Network (RLAN), which provides more security for sensitive data.	Information Technology
IT: Printer and Networked Device Security	There are numerous printers and other networked devices within the university's administrative and academic units. These devices can serve critical roles in processing sensitive data or vital operations critical to continued operations and safety of students and employees. This is of particular concern in that the devices themselves continue to become more complex with their own data storage and operating systems in use, yet may not be secured with the same level of detail that servers or personal computers endure.	Information Technology

Planned Engagement	Overview	Risk Area
IT: Surplus Property	The Procurement Department is responsible for oversight of the disposal of surplus property. The surplus property activity at the university includes disposal of a wide variety of items including vehicles, kitchenware, office equipment, as well as computer and personal electronic equipment. Approximately eight public auctions are held per year at the Surplus Property Warehouse with the proceeds from auction sales returned to the university general fund. Computer and personal electronic equipment sales represent a significant portion of the approximate \$1.1 million in total annual revenue, but also increase the risk of exposure of sensitive data if appropriate data sanitization procedures are not implemented. Sanitization is a dynamic challenge as equipment and device storage methods change.	Information Technology

University Policy Compliance Reviews

University Internal Audit will continue its program of limited scope reviews of senior management areas. These surveys review major aspects of a department's administrative processes using internal control questionnaires and limited testing that provides broad audit coverage ensuring compliance with university policies on campus.

Planned Engagement	Overview	Risk Area
College of Architecture and Urban Studies	The College of Architecture and Urban Studies (CAUS) consists of four schools and a multi-college program. CAUS offers 11 undergraduate majors, 7 minors, and 13 graduate degree programs. Degree programs are based both in Blacksburg and Alexandria, Virginia, and there is an international location in Riva San Vitale, Switzerland through Virginia Tech's Steger Center for International Scholarship.	Operational – Academic
Other Executive Offices	Additional executive offices within the hierarchy of the Office of the President will receive a review. These entities include the Global Forum for Urban and Regional Resilience, the Office of the Senior Fellow for Resource Development, and University Legal Counsel.	Operational – Administrative
Vice President for Finance	The finance division provides the primary support to university leadership in identifying, obtaining, and allocating the resources needed to achieve the university's mission and the goals and objectives of the university's strategic plan. Offices include Budget and Financial Planning, Bursar, Capital Assets and Financial Management, Controller, Procurement, Risk Management, and the University Treasurer.	Operational – Administrative
Vice President for Outreach and International Affairs	The Vice President for Outreach and International Affairs (OIA) supports the university's engagement mission by creating community partnerships and economic development projects, offering professional development programs and technical assistance, and building collaborations to enrich discovery and learning within the Commonwealth and throughout the world. OIA leads Virginia Tech's presence on five continents, regional research and professional development centers across the Commonwealth, and Blacksburg-based centers.	Operational – Administrative

Management Advisory Services

Planned Engagement	Overview	Risk Area
Advancement System (Blackbaud)	In 2015, the university restructured alumni relations, development, and university relations into a more cohesive Advancement division. The Advancement division procured and began implementation of a system designed to support its operations to allow managers to control and evaluate the diverse activities critical to the university, including alumni cultivation, donor relations, prospect management, campaign solicitation, gift processing and accounting, and pledge tracking. Implementation will include conversion of content and database structure while maintaining data integrity.	Information – Technology
Club Sports	An extramural sport club is a group of students who form an organization to practice and compete in a sport. There are currently 31 sport clubs administered by the Virginia Tech Department of Recreational Sports. Each club is comprised students, who organize, fund, and promote their clubs with the ultimate goal of competing against other colleges and universities on both a regional and national level. Club Sports are legally considered to be a part of the Department of Recreational Sports.	Operational – Student
Enterprise Risk Management	Universities face an ever-changing and extensive myriad of risks related to continued success and operation. Enterprise Risk Management (ERM) is an organization-wide systematic approach to identify and tactically manage risk, focusing broadly across all risks: compliance, finance, operations, and strategic. ERM integrates risk into an institution’s strategic plans with the goal of achieving an appropriate balance of risk and return. Some of the benefits of ERM include improved communication on risk among senior leaders and Board members which leads to more informed decisions, better allocation of resources, and stronger governance practices.	Strategic
School of Medicine	The Virginia Tech Carilion School of Medicine represents a unique, public-private partnership between a top-tier research university and a major health care institution. The school, with full accreditation from the Southern Association of Colleges and Schools Commission on Colleges and the Liaison Committee on Medical Education, is slated for transition within Virginia Tech.	Operational – Academic
Title IX Program Policies and Procedures	Virginia Tech receives federal financial assistance in many forms, including research grants from federal agencies. Failing to comply with Title IX or other federal civil rights requirements can result in the termination of all or part of a university’s federal funding. Educational institutions are required to provide women and men in all disciplines comparable resources, support, and promotional opportunities. Title IX requires that males and females receive fair and equal treatment in all areas of education, including athletics. Other areas that fall within the scope of Title IX include recruitment, admissions, course offerings and access, scholarships and financial aid, sexual harassment, assault, and violence.	Compliance
Youth Protection Activities	The university is committed to the safety and welfare of its students, employees, and visitors through the establishment of practices that support a safe and secure environment in all buildings and grounds owned, controlled, or leased by Virginia Tech, including satellite locations, as well as promoting safety	Operational – Administrative

Planned Engagement	Overview	Risk Area
	through policies and programs. Administrators, employees, students, volunteers, and others working with minors (children under the age of 18) have a responsibility to promote their protection.	

Special Projects and Annual Audit Activities

Activity	Overview
Special Projects	Investigate fraud, waste, and abuse allegations.
Annual Audit Activities (Follow-up, Inventory)	Conduct follow-up audit procedures to ensure that management is implementing controls as described within their responses to audit report recommendations. Assist management with year-end inventory counts for financial statement verifications.
External Audit Coordination	Manage and serve as the liaison for all external audit services including contracted and regulatory-imposed audits.

AUDIT RESOURCES

The audit plan for fiscal year 2016-17 is based on professional staffing of 13 full-time equivalents (FTEs). Staffing will be augmented by the continuation of the student internship program in which two Virginia Tech students are employed. Approximately 74 percent of University Internal Audit's available resources are committed to the completion of planned audit projects, management advisory reviews, and investigations. The annual audit plan is designed to provide appropriate coverage utilizing a variety of audit methodologies including audits of individual units, functional and process audits, university-wide reviews, and information system projects. University Internal Audit conducts follow-up audit procedures throughout the year to ensure that management is implementing controls as described within their responses to audit report recommendations.

Audit resources are allocated as follows:

- 52% of University Internal Audit's available resources are committed to the completion of planned audit projects and follow-up audit procedures.
- 14% to accommodate requests from management and consultations with university departments.
- 8% to conduct investigations into fraud, waste, and abuse allegations.
- 13% for employee professional development, internal quality improvement projects, and other internal administrative functions.
- 13% for compensated absences such as annual, sick, and holiday leave.