



**Office of Audit, Risk, and Compliance**  
**Fiscal Year 2023-24 Audit Plan**  
**June 5, 2023**

## OVERVIEW

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The Office of Audit, Risk, and Compliance (OARC) conducts risk-based assurance engagements, policy 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 policy compliance review is to ensure all senior management areas (even low risk) receive periodic reviews from OARC every five years to perform tests of compliance with major university business policies. 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

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### Enterprise Risk Assessment (ERM)

The university instituted an Enterprise Risk Management (ERM) initiative during fiscal year 2017-18 to provide enhanced visibility into the university's risks and to align strategic planning with the resulting risk awareness. OARC facilitates the ERM program by working with university leadership to establish and maintain the framework for collectively identifying and assessing risks across the enterprise. The ERM program intends to strengthen the university's ability to achieve its mission and strategic objectives by:

- Obtaining a holistic view of the most critical risks to the achievement of Virginia Tech's mission and objectives;
- Creating a risk-aware culture, including the management of risks to an appropriate level;
- Improving focus and perspective on both internal and external risks and opportunities, including emerging risks and value drivers;
- Enhancing decision making and alignment with strategic goals; and
- Improving efficiency and optimizing allocation of resources through risk prioritization.

University leadership provided feedback to the ERM process by identifying risks and assessing the risks in terms of likelihood of occurrence, significance of impact, and velocity of onset, all grouped by the categories depicted below:

ERM RISK CATEGORIES	ALTITUDES OF RISK
Strategic	Systemic and Existential
Financial	Institutional
Compliance	Unit-Level
Operational	
Reputational	

In order to maximize efficiency and engagement from university senior leadership, OARC leveraged this complimentary process as an element of the traditional annual risk assessment in support of audit plan development.

### **OARC Audit Planning Risk Assessment**

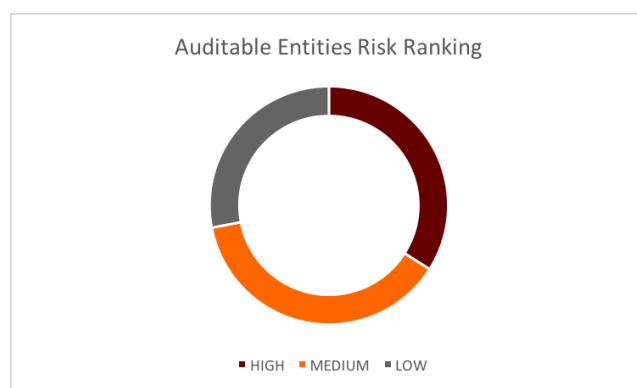
University departments and administrative operations were grouped into approximately 175 auditable entities or responsibility centers based on common missions and the existing organizational structure. For each auditable entity, OARC reviewed financial data, including expenditures, revenues, cash receipts, federal contracts and grants, and total employees.

The relative risk was assessed on a judgmental basis for the following qualitative and quantitative factors.

RISK 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 OARC.

## **IT Risk Assessment**

OARC 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 that is also referenced by university policies. OARC consulted with key IT personnel to ensure that audit coverage is maximized and properly targeted.

The IT risk assessment is driven by the Center for Internet Security's Critical Security Controls and Virginia Tech's Minimum Security Standards, which lay the IT security foundation for the university. OARC considers these controls and the relative risk of the decentralized computing environment as it identifies the topical audits in the plan. Careful consideration is made to ensure coverage includes administrative, academic, and research computing.

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 OARC 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**

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OARC 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 to validate the plan, OARC management conducted one-on-one discussions 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 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 2023-24 AUDIT PLAN

The audit plan focuses on delivering value to Virginia Tech with an emphasis on the following 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. The fiscal year 2023-24 audit plan includes 31 projects, and OARC'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 2021-22 data unless otherwise noted.

### Risk-Based Assurance

Planned Engagement	Overview	Risk Area
ADA Compliance	The Americans with Disabilities Act (ADA) is a federal law that prohibits discrimination against individuals with disabilities in all areas of public life, including employment, education, transportation, and public accommodations. ADA compliance requires making reasonable accommodations to ensure equal access and opportunity for individuals with disabilities. Campus-wide ADA compliance involves many offices including ADA and Accessibility Services, colleges and departments, Services for Students with Disabilities, and University Legal Counsel among others. A prior review of this activity has not been conducted.	Compliance – Human Resources and Student Services
Agricultural Research and Extension Centers	Agricultural Research and Extension Centers (ARECs) perform research on food and fiber systems, their impact on the environment, and their relation to the future needs of Virginia, the nation, and the world. Eleven ARECs are dispersed throughout the state and are geographically separated from the main campus. The expenditures for these ARECs exceed \$20 million, including \$6.6 million of sponsored research. The last audit of two of these ARECs was in 2011.	Operational – Off-Campus Locations
Aerospace & Ocean Engineering	The Kevin T. Crofton Department of Aerospace & Ocean Engineering, within the College of Engineering, offers a “foundation of versatility” through its unusual approach to understanding and exploiting the similarities between two seemingly disparate fields. The department had expenditures of \$22.3 million, including \$11.9 million of sponsored research. The last audit of this department was in 2014.	Operational – Academic
Athletics *	The Department of Athletics, an approximately \$121.8 million enterprise, sponsors 22 athletic teams at the NCAA Division I level. A component of Athletics is included in the audit plan each year.	Compliance - Athletics
Capital Campaign Processes and Reporting	The university is in the midst of an ambitious, multi-year \$1.872 billion capital campaign. This review will look at the systems, processes, and controls in place to ensure the campaign has an appropriate level of control and accurate reporting.	Operational – Advancement
Chemistry	Chemistry, within the College of Science, has been taught at the university since its founding. The department is home to nationally and internationally recognized faculty, strong academic programs, and state-of-the-art facilities. The department had expenditures of \$24.6 million, including \$10.9 million in sponsored research. The last audit of this department was in 2018.	Operational – Academic
Commonwealth Cyber Initiative	The Commonwealth Cyber Initiative (CCI) was created in July 2018 when the Virginia General Assembly passed legislation establishing the CCI to “serve as an engine for research, innovation, and commercialization of cybersecurity technologies, and	Operational

Planned Engagement	Overview	Risk Area
	address the Commonwealth's need for growth of advanced and professional degrees within the cyber workforce." That legislation required Virginia Tech to develop a blueprint for development and operation of the initiative. A prior review of this activity has not been conducted.	
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 asset system which includes land, buildings, improvements, fixed and moveable equipment. This area was last reviewed in 2017.	Operational – Financial Management
Data Analytics: Sponsored Equipment Purchases	Building on the recently completed data analytic work focused on research activity, this project will continue efforts to refine analytics to identify and proactively monitor for common research compliance issues at both the grant, principal investigator, and department level.	Compliance – Research
Data Analytics: Travel Compliance Monitoring	Working with an increasing large set of data, this project will take a comprehensive look at travel data for common areas of non-compliance, waste, and potential abuse.	Compliance – Financial Management
Environmental Health and Safety	Environmental Health and Safety provides institutional support and oversight for departments in maintaining regulatory requirements of laboratory safety and chemical hygiene. Department personnel perform routine inspections of areas both on and off campus. Additionally, the department provides training mandated by many federal and state agencies. The department was last reviewed in 2015.	
Facilities Management	Facilities management is a hybrid activity at the university with central coordination by Facilities Operations, in the Division of Campus Planning, Infrastructure, and Facilities, and certain decentralized units. In general, facilities management includes the maintenance of buildings, electrical/mechanical systems, and the grounds of both the Blacksburg and distributed locations. This review will include processes deployed by both central and distributed units. The central Facilities Operations was last reviewed in 2015.	Operational – Facilities and Operations
Global Education Office	The Global Education Office strengthens the university's mission of global engagement, discovery, and service by connecting our faculty and students to their peers abroad; inspiring and contributing to the faculty's creation and promotion of cross-cultural learning experiences; and supporting the development of our students into globally competent citizens. The department was last reviewed in 2018.	Operational - Operations
Human Resources: Hiring / On-boarding *	A critical component of new hire processing and on-boarding is the various processes necessary to ensure compliance with laws/regulations, conduct appropriate background and credential checks, and correctly classify employees for initial training. A component of Human Resources is included in the audit plan each year.	Operational – Human Resources
Institute for Critical Technology and Applied Science	The Institute for Critical Technology and Applied Science (ICTAS), one of the seven research institutes, forges partnerships across disciplinary boundaries that enhance the university's ability to embrace ambitious research opportunities in the service of society and catalyze discovery at the intersections of engineering, the humanities, and the physical, life, and social sciences. The institute had expenditures of \$11 million, including \$2.8 million in sponsored research. This institute was last reviewed in 2016.	Operational – Research

Planned Engagement	Overview	Risk Area
IT: DocuSign Controls	DocuSign eSignature provides a fast and secure way to send, track, and sign agreements anytime, anywhere, on a wide variety of devices. Deployed to campus in late 2020, DocuSign usage has greatly expanded for increasingly more complex and sensitive matters. This review will evaluate the controls environment utilized by users of this increasingly important tool. A prior review of this activity has not been conducted.	Operational – Information Technology
IT: HIPAA Security	HIPAA (Health Insurance Portability and Accountability Act) is a federal law that sets national standards to protect the privacy and security of individuals' personal health information. It also establishes rules for the use and disclosure of this information by healthcare providers, health plans, and other entities covered under the law. Recently the university has established IT infrastructure necessary to conduct HIPAA-protected research. This activity has never been audited.	Compliance – Information Technology
IT: Inventory and Classification	Recently the university completed its first comprehensive inventory and classification efforts dedicated to IT assets. This review will conduct extensive procedures to verify the veracity and accuracy of both the inventory and associated classification of the assets. This activity has never been audited as a standalone activity.	Operational – Information Technology
IT: Policy Compliance Review Approach	With the deployment of a university-wide IT asset inventory, classification, and risk assessment process, changes will need to be made to OARC's approach to IT work in policy compliance reviews. Knowing these updates were forthcoming, OARC delayed three IT related policy compliance reviews in Spring 2023. This review will establish the methodology and conduct the delayed IT reviews for Advancement, Athletics, and the Innovation Campus.	Operational – Information Technology
Real Estate Management	Real Estate Management provides assistance to the university community in the areas of leasing and property management of real estate, property acquisitions, transfers, sales, real estate easements and rights-of-way, and disposal and demolition of surplus buildings. Real Estate Management also serves as the repository of all university deeds, leases, and other real estate documents, including facility use agreements. This was last reviewed in 2016.	Operational - Facilities and Operations
School of Plant and Environmental Sciences	The School of Plant and Environmental Sciences, within the College of Agriculture and Life Sciences, seeks to train the next generation of professionals in the fields of plant breeding and genetics, agronomic and horticultural crop production, plant protection, soil and water systems management, agricultural technologies, environmental restoration, and agro-environmental stewardship. The School had expenditures of \$22.5 million, including \$7.2 million of sponsored research. The School has never been reviewed.	Operational – Academic
Sponsored Programs – Pre Award / Contracts	The Office of Sponsored Programs (OSP) is the authorizing agent for the university for all extramurally funded activities. Pre Award has three primary functions in the proposal process including reviewing solicitations and requests for proposals for specific budget and proposal preparation instructions; preparing budgets for proposals according to Virginia Tech and sponsor guidelines; and submitting all proposals to external sponsors. This activity was last reviewed in 2010.	Compliance - Research

Planned Engagement	Overview	Risk Area
Strategic Enrollment Reporting	The university has entered into agreements with the Commonwealth regarding the enrollment and graduation of certain populations of students. This review will ensure the controls around the reporting are adequate and that accurate results are being reported to the Commonwealth. This activity has never been reviewed.	Compliance – Enrollment Services
Student Wellness and Counseling	The university has invested heavily in the wellness of its students through a multitude of offerings. Additionally, Student Affairs has recently altered its support model for on-campus students. This review will take a holistic look at both the counseling center, online counseling offerings, residential support model, and other aspects of student wellness. The last dedicated review of this office was in 2015.	Operational – Student Services
University Scholarships and Financial Aid*	The Office of University Scholarships and Financial Aid (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 \$574 million in student financial assistance. A component of USFA is included in the audit plan each year.	Compliance – Enrollment Services

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

### **University Policy Compliance Reviews**

OARC will continue its program of limited scope reviews of senior management areas. These reviews evaluate 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 Agriculture and Life Sciences	The College of Agriculture and Life Sciences, a part of the university since its founding 150 years ago, has 12 academic programs offering a diverse range of degree programs from an associate's degree to doctoral programs. The college had \$167 million in expenditures and \$44 million in sponsored research. The last policy compliance review was in 2019.	Operational
College of Architecture, Arts, and Design	The College of Architecture, Arts, and Design is a community of architects, designers, artists, and creators of communities who care about—and work to improve—the shared natural and built environments. The college is composed of four schools sharing a vision to understand and shape the spaces and places where they live, work and play. The college had \$31.9 million in expenditures. The last policy compliance review in 2017.	Operational
College of Veterinary Medicine	Established in 1978, the Virginia-Maryland College of Veterinary Medicine is a leading biomedical teaching and research center and the in-state veterinary college for residents of Virginia and Maryland. The college's locations include the main campus in Blacksburg, Virginia; the Animal Cancer Care and Research Center in Roanoke, Virginia; the Marion duPont Scott Equine Medical Center in Leesburg, Virginia; and the Gudelsky Veterinary Center in College Park, Maryland. The college had \$74.9 million in expenditures and \$13.7 million in sponsored research. The last policy compliance review of this area was in 2018.	Operational
Vice President for Student Affairs	The Vice President for Student Affairs' mission is to promote student learning, life skills, and personal growth through a strong focus on holistic student development and collaborative partnerships that deliver superior service to, and care for,	Operational



Planned Engagement	Overview	Risk Area
	students in the spirit of Ut Prosim. The division had \$146 million in expenditures. The last policy compliance review of this area was in 2019.	

### **Management Advisory Services**

Planned Engagement	Overview	Risk Area
Athletics Data Privacy	Athletics maintains separate records on student-athletes that are high risk. This advisory review will seek to inventory the various types of data, review the processes and procedures used to secure the data, and ensure the university Minimum Security Standards are being deployed appropriately.	Compliance – Information Technology
High-risk Drug Inventory / Oversight	Certain substances contained within labs across the university are at a higher risk of abuse. This project will be a joint project between Institutional Compliance, distributed compliance owners, and lab personnel to understand the processes and procedures deployed to oversee and keep inventory of these drugs.	Compliance – Safety and Security
Research Accounting Processes	At the university, there is a multitude of ways utilized to calculate “research expenditures.” Each calculation is reflective of the individual agency, regulator, or partner’s requirements. This often causes confusion as to what the university research activity is or how it is accounted. Recently, the university established a working group to explore these issues co-lead by the Controller’s Office and the Office of Research and Innovation. This advisory review, in partnership with the working group, will look at processes and procedures used to compile and review the various research expenditures reports.	Operational – Financial Management
Remote Working Compliance	The rapid pivot to remote working environments adds increasing complexity to various compliance areas, including payroll and benefits. This advisory project will review the actions taken by the institution to manage these risks and look at aggregating additional data to ensure we are meeting this challenging area.	Compliance

### **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.
External Audit Coordination	Manage and serve as the liaison for all external audit services, including contracted and regulatory-imposed audits.

## **AUDIT RESOURCES**

The fiscal year 2023-24 audit plan is based on professional staffing of 12 full-time equivalents (FTEs). This plan includes a small adjustment to reflect historic trends of some turnover and extended family leave within the fiscal year. Staffing will continue to be augmented by the continuation of the student internship program in which two Virginia Tech students are employed.

Approximately 75 percent of OARC’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. OARC 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:

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

## AUDIT PLAN MAPPED TO ERM

As part of the ERM program, university leadership has identified key residual risks across six thematic areas. The graphic below depicts how planned projects will provide audit coverage of enterprise risks.

