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Introduction

The purpose of this Information Security Program is to provide an overview of the policies, standards and procedures that make up Old Dominion University’s IT Security Program, which can be found at http://occs.odu.edu/policies/index.php. These policies, standards and procedures document the practices undertaken to protect information which falls under federal and state laws and regulations such as HIPPA, FERPA, and Gramm-Leach-Bliley Act. The intent of the program is to provide effective security balanced with the need for maintaining the open and collaborative network environment required for higher education institutions to foster scholarly activity and to remain competitive. Consistent with Old Dominion University’s Memorandum of Understanding granting Level II delegated authority from the Commonwealth under the Virginia Restructured Higher Education Financial and Administrative Operations Act of 2005, and in keeping with ODU Policy 3505- Information Security Policy, ODU exercises independent authority for establishing and executing its information security program.

It is the collective responsibility of all users to ensure:

- Confidentiality of information which ODU must protect from unauthorized access
- Integrity and availability of information stored on or processed by ODU information systems
- Compliance with applicable laws, regulations, and ODU policies governing information security and privacy protection

The Information Technology Security Program establishes guidelines and principles for initiating, implementing, maintaining, and improving information security management for Old Dominion University. The program is intended to protect the confidentiality, integrity and availability of information resources and is not intended to prevent, prohibit, or inhibit the sanctioned use of information technology resources as required to meet Old Dominion University’s mission and academic and administrative goals.

Scope

The program applies to all users, all information assets, facilities, applications, systems and network resources. Auxiliary organizations or any entity, including third parties, using Old Dominion University information technology resources must operate those assets in conformity with the Old Dominion Information Technology Security Program, unless otherwise formally exempted by the President or his designee.
Information Security Policy

Policy is developed and executed, and expectations are set for protecting University information assets. These are supported by related policies, standards, guidelines and practices to facilitate campus compliance:

- Policies are high-level statements of principle that provide technology direction to the campus community.
- Standards establish specific criteria and minimum baseline requirements or levels that must be met to comply with policy. They provide a basis for verifying compliance through audits and assessments.
- Guidelines are recommended or suggested actions that can supplement an existing standard or provide guidance where no standard exists.

Policy development is driven by ODU policies and directives, new legislation and regulations, audit findings, risk assessment and University strategic planning and initiatives. Key campus stakeholders are consulted early on and research is conducted to find potential models from other universities.

As the designated official, the Assistant Vice President of the Office of Computing and Communications Services, formally proposes University-wide policies, standards and guidelines through the process defined in Policy 1001 Development, Approval and Maintenance of University Policy. Under the broad authority provided by the University Policies, the Assistant Vice President establishes specific requirements for all members of the University community. The formulation and distribution of information technology policies, standards, procedures, and guidelines connect the university's mission to individual conduct, institutionalize impartial expectations, support compliance with laws and regulation, mitigate institutional risk, and enhance productivity and efficiency in the University's operations.

Overarching policies governing information technology are in place as follows.

- Policy 3500 – Policy on the Use of Computing Resources
- Policy 3501 – Information Technology Access Control Policy
- Policy 3502 – Information Technology Infrastructure, Architecture, and On-going Operations
- Policy 3504 – Data Classification Policy
- Policy 3505 - Information Security Policy
- Policy 3506 - Electronic Messaging Policy for Official University Communication
- Policy 3507 - Information Technology Accessibility Policy
- Policy 3508 - Information Technology Project Management Policy
**Security Policy Management**

In collaboration with all appropriate University representatives, the Information Security Officer (ISO) leads efforts to develop, approve, and launch a suite of information security policies and standards, based upon the industry’s best practices in information security. These policies, standards and guidelines formally establish the University’s Information Technology Security Program and set forth employee responsibility for information protection.

The security policy also incorporates security requirements of applicable regulations including, but not limited to, the Family Educational Rights and Privacy Act, Payment Card Industry Customer Information Security Program, Gramm-Leach-Bliley Act and Health Insurance Portability and Accountability Act. Professional organizations, such as the national EDUCAUSE Association and the Virginia Alliance for Secure Computing and Networking (VASCAN), also serve as resources for additional effective security practices.

The graphic below illustrates the governance of the policy development and approval structure.

A complete list of security policies, standards and guidelines can be found on the Office of Computing and Communications Services Web site.

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Office of Computing and Communications Services  
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Security Organization and Governance

Information security cannot be treated solely as a technology issue. Based on the institution’s growing dependence on information technology and information technology-based controls, information and information technology security risks increasingly contribute to operational and reputational risk. Information security is an intrinsic part of governance and consists of the leadership, organizational structures and processes that safeguard Old Dominion University’s information, its operations, its market position, and its reputation.

Board Authority

The Virginia Code Section 23-9.2:3, as amended, grants authority to the Old Dominion University Board of Visitors to establish rules and regulations for the institution. Section 6.01(a) (6) of the Board of Visitors Bylaws grants authority to the President to implement the policies and procedures of the Board relating to University operations. Virginia Code Section 23-38.88, as amended, allows public institutions of higher education the opportunity for specific structured financial and administrative operational authority.

The Old Dominion University Board of Visitors approved University Policy 1626, an Information Technology Management Policy, in September 2005 in support of the Restructured Higher Education Financial and Administrative Operations Act. The purpose of University Policy 1626 was to establish a comprehensive and uniform policy for the realignment of information technology authority and responsibilities from the Commonwealth of Virginia to Old Dominion University under the provisions of 23-38.88, Code of Virginia.

CIO Authority

The Board of Visitors designated the general technology management responsibilities to the Assistant Vice President of the Office of Computing and Communications Services, reporting to the Vice President of Administration and Finance. The Assistant Vice President of the Office of Computing and Communications Services is also assigned the responsibilities of the Chief Information Officer (CIO). These responsibilities include, among others, the direction of policies and procedures for the effective management of information technology investments such as the security program. University Policy 1626 also delegated specific responsibilities to the institutional oversight committee, Information Technology Advisory Committee (ITAC), a body appointed by the University representing various campus constituencies. Security audits were deemed the responsibility of Old Dominion University’s Internal Audit Department and the Commonwealth of Virginia’s Auditor of Public Accounts.

Information Security Officer

As the overall IT security responsibilities are assigned to the President of Old Dominion University as Agency head, the President designates the Information Security Officer (ISO) the responsibility
to develop and manage Old Dominion University’s IT security program and to coordinate and provide IT security information to the CIO. The ISO oversees annual reviews of the security program and communicates any changes or additions to the appropriate stakeholders. In addition, the program is updated to reflect changes in ODU policy, academic, administrative, or technical environments, or applicable laws and regulations. The ISO reports to the President on the current state of campus security relative to protecting University information assets as needed.

**Roles and Responsibilities**

For clarity within the University community, the security roles are defined in [Standard 2.2.1 Assignment of IT Security Roles](#). As Agency Head, the President is designated as the responsible individual for the security of Old Dominion’s IT systems and data. The President designates the Information Security Officer (ISO) to develop, implement and maintain a program of IT safeguards.

The responsibilities of the ISO and other positions with security duties are described in detail in [Standard 2.2.2, IT Security Roles and Responsibilities](#). Personnel identified perform their assigned responsibilities in support of the IT Security Program. This Standard details the internal organization of information security and allocation of security responsibilities. It establishes management controls, the dedicated roles of individuals, review, approval and compliance processes and the plans to coordinate controls across the organization. Other Standards further elaborate on the defined roles.

Technical support staff and individual users are expected to follow established standards and practices and to report potential security violations. Administrators across the University are responsible for ensuring information security policies, standards and practices are followed by employees in their respective areas.

**Personal Privacy and Data Security**

All users of information technology resources are advised of the open nature of information disseminated electronically, and must not assume any degree of privacy or restricted access to information they create or store on campus systems. Old Dominion University is a public university and information stored on campus information systems may be subject to disclosure under state law. The University will disclose information about individuals only to comply with applicable laws or regulations, to comply with or enforce applicable policy, to ensure the confidentiality, integrity, or availability of campus information, and to respond to valid legal requests or demands for access to campus information.
User access to IT systems is based on the principle of least privilege. Proper authorization and approval by the IT system user’s supervisor and the System Owner is required for access. The [Standard 5.2.2 Account Management](#) identifies practices used in requesting, granting, administering and terminating account access.

**Access Control**

Access to information technology resources is controlled on the basis of business need and security requirements. Network access control lists enforce specific security and business requirements. Access management, user registration and termination, and privilege management govern the allocation of rights. Sets of controls are in place that restricts access through technical structures and authentication methods. Passwords are managed through a formal process and secure log-on procedures.

Sensitive systems are explicitly identified and receive special handling. Network access and routing controls are applied for users and equipment. Appropriate authentication controls are used for external connections and remote users. Physical and logical access to diagnostic and configuration ports and utility programs are controlled. Duties are separated to protect systems and data. Access rights are audited at regular intervals.

**Systems Security**

System Security is maintained over the lifetime of systems through a series of standards intended to protect Old Dominion University resources from project initiation through implementation and maintenance of the system, and upon retirement and disposal of the system. Project management standards specify risk-based project classification. System planning includes a Risk Assessment standard to be followed prior to placing a system into production status. Pre-implementation practices are specified in system scanning standards. Implementation practices are specified by a change management standard which outlines planning, communicating, testing, planning a back-out strategy, gaining approval and executing the change in a controlled manner.

**Security Awareness and Training**

The focus of security awareness at Old Dominion University is aimed at creating an attitude towards a commitment to good security practices and facilitating a climate that sees security rules as beneficial to the protection of the University environment. Users must formally acknowledge their responsibilities through the acceptance of a statement on the terms of use of information technology resources. Training is required on an annual basis.

Security awareness information is provided to new employees and new students at the time of orientation. Online resources are provided to educate users on best computing practices and the importance of reporting security incidents. Security tools are provided at no charge. News of email scams, phishing attempts and other malicious actions are posted to inform users of possible threats.
Identity Management
Old Dominion University maintains a diverse technical environment with many services which require unique identifying credentials in order to gain access and authorization. These credentials are managed as much as possible though central identity management systems. As part of a long-range goal to streamline access to computing resources at Old Dominion University, the Office of Computing and Communications Services has developed MIDAS (Monarch IDentification and Authorization System). MIDAS allows users to have one account ID and password for accessing multiple computing resources at the University. For many systems, this allows access to computing resources that is authorized on the basis of roles (faculty, staff, or student). This system continues to be developed with fundamental security principles in mind. Account administration is guided by account management and access standards.

Incident Management
Old Dominion University’s Information Security Incident Response plans involve preparation for incidents, detection and analysis, containment, eradication, recovery and review. The process for responding to security incident is designated in Standard 9.4.2 on IT Security Incident Handling. Security incidents are managed by the Information Security Team who ensures that security incidents are promptly reported, investigated, documented and resolved in a manner that restores operation quickly and, if required, maintains evidence for further disciplinary, legal, or law enforcement actions. Incident response program is reviewed annually and modified as needed to comply with applicable laws and University policies and standards.

Preparation for potential incidents includes conducting System Inventories and Risk Assessments for sensitive systems, system security planning, management practices for desktops, servers, networks and projects, system hardening and data protection measures. Detection, analysis, containment, recovery and review include several mechanisms such as malicious code scanning, virus protection, intrusion detection, monitoring, logging and incident handling protocols. Multiple Standards are in place to support these efforts.

Operational Security
Operational security involves policies and practices related to operating the Old Dominion entire enterprise with secure practices that impact the confidentiality, integrity and availability of information. It includes asset management, human resources security, physical and environmental security, communications and operations management, system security lifecycle development, change management, project management security practices, operating procedures, resource planning, media handling, system monitoring, the management of third-
party agreements and coordination of efforts involved in a thorough information security program.

Operational security at ODU has been established over a long period of time with participation from Human Resources, Network Communications, OCCS Operations, OCCS Project Management Office, Facilities Management, Material Management, the Business Office of OCCS, University Police and others.

To ensure the secure operation of information technology facilities and resources, system activities must be managed consistently and under a set of principles and controls.

**Risk Management**

Identifying and prioritizing risks form the basis for determining appropriate actions to take. Risk assessment involves evaluating risks and their likelihood along with selecting and implementing controls to reduce risks to an acceptable level. Each risk assessment documents major findings and risk mitigation recommendations. No set of controls can achieve complete security so assessments are completed as needed to evaluate the effectiveness of the controls but not less than every three years.

**Physical Security**

Physical areas where information assets contain protected data are protected from unauthorized physical access. Many IT assets are located in public and non-public access areas and must be physically secured to prevent theft, tampering, or damage. The Standard 7.2 on Information Technology Facilities Security establishes requirements for safeguarding the facilities that house equipment, systems, services and personnel. Controls also include environmental essentials, monitoring and auditing and periodic reviews. Management conducts reviews and documents physical access rights to campus limited-access areas on a routine basis.

System Configuration Management is outlined via several system management standards including Desktop Management, Server Management and Network Management standards. Overall system security during the production lifetime is maintained via operational security standards including malicious code protection; logical access controls standards, data protection standards, facility security standards, personnel security standards and IT System Security standards. Data disposal is specified in a data media protection standard and a data disposal standard.

**Personnel Security**

In addition to defining security roles and responsibilities, personnel security is addressed through pre-employment screenings, adequate position descriptions, terms of employment, and security education and training. The Standards of Conduct and Code of Ethics express responsibilities regarding confidentiality, data protection, ethics, and appropriate use of facilities, materials and equipment. Third party users are made aware of their responsibility to comply with relevant
laws, regulations and University expectations. Contractual arrangements further reflect the University’s security policies.

**Contingency Planning**

Contingency planning is conducted to minimize the impact and loss of information assets in the event of a disaster. Business continuity plans are developed in accordance with Standard 2.3.2 Business Impact Analysis to understand risks and to identify and prioritize critical business processes.

Based on the results of the analysis, a risk assessment is performed to evaluate the probability and impact and to consider the consequences to information security. An overall strategy is developed for crisis management, recovery and restoration. Plans are formalized with agreements as to the required levels of operation, the time frames, and the implementation strategy. Continuity plans are tested regularly to ensure that they are up to date and effective.

**Security Assessments and Reviews**

Regular assessments are performed using multiple layers of assessments. System Owners and Data Owners conduct Risk Management reviews in accordance with Standard 2.6.2 Risk Management. Security configurations are reviewed annually and reapplied when systems undergo material modifications.

Management’s approach to information security is reviewed on a regular schedule and as necessary to ensure continuing appropriateness, adequacy and effectiveness. By Standard 2.8 Security Program Review, the IT Security Program is reviewed and evaluated by the ISO and the security team regularly to discuss specific incidents and to identify areas of concern. Additionally, the team meets at planned intervals or if significant changes occur to assess opportunities for improvement or to manage security threats or other conditions. Standard 4.3.2 System Security ensures a review of controls and how controls provide adequate mitigation to identified risks. Security plans are completed by the System Owner. The plans are reviewed by the Information Security Officer for approval. Also, the institutional oversight committee, Information Technology Advisory Committee (ITAC), reviews standards annually and provides input to the security plan.

Board of Visitor’s Policy 1610 Charter of the Internal Audit Department summarizes the department’s objectives to evaluate and improve the effectiveness of risk management, control and governance processes. One of the key objectives of Internal Audit is “evaluating the accuracy, security, effectiveness and efficiency of the University’s information technology and processing systems.” The Internal Audit Director meets quarterly in executive session with the
Audit Committee of the Board of Visitors to report audit findings. In addition, the Auditor of Public Accounts for the Commonwealth of Virginia and other external auditors that have business with the University perform external reviews.

**Annual Security Plan**
The Information Security Officer submits a comprehensive review of the Security Program annually to the CIO in compliance with the Standard 2.8 Security Program Review. This review includes a summary of reviews and assessments during the previous year along with recommendations for addressing identified vulnerabilities.

**Compliance**
Old Dominion University’s information security practices must comply with a variety of federal and state laws, and institutional policies designed to protect individuals and organizations against the unauthorized disclosure of information that could compromise their identity or privacy. Legal regulations cover a variety of types of information including personally identifiable information, personal financial information, medical information, and confidential student information.

There are many individual laws, regulations, and policies that establish our information security requirements. Some of the most notable include:

- Family Educational Rights and Privacy Act (FERPA)
- Federal Information Security Management Act
- Gramm-Leach-Bliley Act (GLBA)
- Health insurance Privacy and Accountability Act (HIPAA)
- Payment Card Industry Data Security Standard (PCI DSS)
- Privacy Act of 1974
- Sarbanes-Oxley Act of 2002
- Virginia Computer Crime Act

Additional laws and regulations specify the disclosure of employee and student information and require the University to take specific actions in the event the institution suspects protected information may have been disclosed either accidentally or maliciously to unauthorized parties. The process of identifying the triggering factors and the resulting notification responses are outlines in Standard 9.5.2 Data Breach Notification.

**Policy Enforcement**
The Information Security Officer or designee will ensure that suspected violations and resultant actions receive the proper and immediate attention of the appropriate University officials, law
enforcement, outside agencies, and disciplinary/grievance processes in accordance with due process.

Allegations against employees that are sustained may result in disciplinary action. Such actions will be handled as noted in Standard 1.4.0 Disciplinary Action. Student infractions will be coordinated with the Office of Student Conduct and Academic Integrity using established policies and practices. Third party service providers who do not comply may be subject to appropriate actions as defined in contractual agreements or other legal remedies available to the University. Non-compliance may result in personal, criminal, civil, or other administrative liability.

Old Dominion University reserves the right to temporarily or permanently suspend, block, or restrict access to campus information assets, independent of such procedures, when it reasonably appears necessary to do so in order to protect the confidentiality, integrity, availability or functionality of ODU information assets; to protect ODU from liability; or to enforce this policy and its related standards and practices.