

Audit Report

University System of Maryland University of Maryland University College

November 2019



**OFFICE OF LEGISLATIVE AUDITS
DEPARTMENT OF LEGISLATIVE SERVICES
MARYLAND GENERAL ASSEMBLY**

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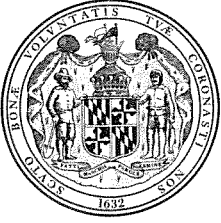
Office of Legislative Audits
301 West Preston Street, Room 1202
Baltimore, Maryland 21201
Phone: 410-946-5900 · 301-970-5900 · 1-877-486-9964 (Toll Free in Maryland)
Maryland Relay: 711
TTY: 410-946-5401 · 301-970-5401
E-mail: OLASWebmaster@ola.state.md.us
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DEPARTMENT OF LEGISLATIVE SERVICES
OFFICE OF LEGISLATIVE AUDITS
MARYLAND GENERAL ASSEMBLY

Victoria L. Gruber
Executive Director

Gregory A. Hook, CPA
Legislative Auditor

November 6, 2019

Senator Craig J. Zucker, Senate Chair, Joint Audit and Evaluation Committee
Delegate Shelly L. Hettleman, House Chair, Joint Audit and Evaluation Committee
Members of Joint Audit and Evaluation Committee
Annapolis, Maryland

Ladies and Gentlemen:

We have conducted a fiscal compliance audit of the University System of Maryland (USM) – University of Maryland University College (UMUC) for the period beginning July 1, 2014 and ending September 30, 2018. UMUC offers degree and non-credit educational programs to students who prefer not to enroll in more traditional programs.

Our audit disclosed that UMUC had no process for independently verifying the propriety of students granted military residency status. Such verifications are necessary since tuition charged to students with military status is significantly lower than that charged to students classified as out-of-state. During the spring 2018 semester, 22 percent of 55,887 enrolled students at UMUC were classified as military.

In addition, UMUC made termination payments totaling \$292,000 to a former employee that were not consistent with UMUC's policy under which the payments were made.

Additionally, certain malware controls did not exist for numerous UMUC computers and two independent security assessment reports for outsourced information technology functions did not address certain security and operational controls.

In February 2015, the USM Board of Regents approved the framework for a new business model for UMUC, wherein UMUC remained within USM but was

granted certain autonomies and exemptions from USM and State laws, rules, and procedures. Consistent with this business model, UMUC established certain business entities to help UMUC maintain its position in a changing global marketplace. UMUC provided start-up funding to these entities, totaling \$25 million, and paid these entities \$44 million for certain services the entities provided to UMUC during the audit period. The financial activity of these entities, which are not units of UMUC, was not subject to audit.

Finally, our audit included a review to determine the status of the three findings contained in our preceding audit report. We determined that UMUC satisfactorily addressed two of these findings. The remaining finding is repeated in this report.

The USM Office's response to this audit, on behalf of UMUC, is included as an appendix to this report. In accordance with State law, we have reviewed the response and, while UMUC agrees with the recommendations in this report, we identified certain instances in which statements in the response conflict with or disagree with the report findings. In each instance, we reviewed and reassessed our audit documentation, and reaffirmed the validity of our finding. In accordance with generally accepted government auditing standards, we have included "auditor comments" within the response to explain our position. Finally, there are other aspects of the response which will require further clarification, but we do not anticipate that these will require the Committee's attention to resolve.

We wish to acknowledge the cooperation extended to us during the audit by UMUC. We also wish to acknowledge USM's and UMUC's willingness to address the audit issues and implement appropriate corrective actions.

Respectfully submitted,

A handwritten signature in black ink, reading "Gregory A. Hook". The signature is written in a cursive, flowing style.

Gregory A. Hook, CPA
Legislative Auditor

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* Denotes item repeated in full or part from preceding audit report

Background Information

Agency Responsibilities and Name Change

The University of Maryland University College (UMUC) is a public institution of the University System of Maryland (USM) and operates under the jurisdiction of the USM's Board of Regents (BOR). UMUC offers degree and non-credit educational programs to students who prefer not to enroll in more traditional programs. UMUC strives to broaden educational opportunities through online education; the majority of UMUC's courses are taught online.

UMUC consists of three major divisions: the Statewide Division, the Asian Division, and the European Division. These three divisions offer educational programs at a number of locations primarily throughout the State of Maryland, as well as in numerous foreign countries. The Statewide Division also administers educational and training programs for adults, and maintains a residential conference center that includes conference rooms, guest accommodations, dining facilities, and an auditorium. UMUC's main administrative office and residential conference center are located in Adelphi, Maryland. The Asian Division is headquartered in Tokyo, Japan and the European Division is headquartered in Kaiserslautern, Germany.

For fiscal year 2018, UMUC's enrollment totaled 89,383 students. UMUC's budget is funded by unrestricted revenues, such as tuition and student fees; a State general fund appropriation; and restricted revenues, such as federal grants. According to UMUC's records, fiscal year 2018 revenues totaled approximately \$431 million, which included a State general fund appropriation of approximately \$43.2 million.

Chapter 40, Laws of Maryland 2019, effective July 1, 2019, changed the name of UMUC to the University of Maryland Global Campus (UMGC).

UMUC Business Initiatives

In February 2015, the USM BOR approved the framework for a new business model for UMUC aimed at addressing its long-term challenges in maintaining its position in a changing global marketplace. Under this new model, UMUC remains within USM, but was granted certain autonomies and exemptions from USM and State laws, rules, and procedures, and strengthened protections of UMUC's proprietary and competitive information.

During the audit period, UMUC established certain business entities consistent with this new business model, two of which were designated as High Impact Economic Development Activities (HIEDA). HIEDAs are initiatives which, according to State law, may be established by designated institutions of higher education, including USM, to promote the economic interests of the State in areas such as job creation and workforce development, technology transfer, commercialization, and entrepreneurship. Proposals for establishing a HIEDA must be presented to the USM Chancellor to obtain certification as meeting the required criteria established in the law. Employees of these business entities, including any former UMUC employees who transferred to these entities, are not State employees.

In September 2015, the BOR approved UMUC's first HIEDA entity—a spin-off of its Office of Analytics into a private company—as a way to establish a new revenue stream. Specifically, HelioCampus, was established as a legally distinct entity with UMUC as the sole shareholder. HelioCampus provides services, such as data analytics and data-sharing platforms, to assist universities with increasing enrollment, improving student success, and ensuring financial stability. In October 2015, UMUC transferred \$10 million to HelioCampus for startup funding. According to UMUC management, UMUC plans to support HelioCampus during its first five years of existence, but then will be open to monetization opportunities, such as selling HelioCampus or taking it public.

In June 2016, the BOR approved the creation of a second HIEDA entity, UMUC Ventures, as a tax-exempt holding company. UMUC Ventures was created to (1) help commercialize the technology, business processes, and intellectual property of UMUC; (2) increase UMUC's enrollment revenues through corporate partnerships; and (3) expand the revenues of UMUC into new areas to support UMUC and to build an endowment to reduce the cost of higher education for Maryland residents. UMUC Ventures acts as the holding company for businesses commercialized by UMUC. The president of UMUC appoints the chairperson and the majority of UMUC Ventures' 11-member board of directors. UMUC transferred \$15 million, through three installments, to UMUC Ventures for start-up funding. In September 2016, UMUC transferred its ownership in HelioCampus to UMUC Ventures.

Finally, in June 2017, the BOR approved UMUC's spin-off of its Office of Technology into a subsidiary company within UMUC Ventures. The subsidiary company, AccelerEd, offers professional information technology services, for a fee, to educational institutions, including UMUC. UMUC did not provide any start-up funding for AccelerEd, which is not classified as a HIEDA.

According to UMUC's records, in addition to the \$25 million in start-up funding, UMUC paid UMUC Ventures (including AccelerEd) and HelioCampus approximately \$44 million during the audit period for contracted services these entities provided to UMUC, such as professional information technology services and data analytics.

An independent certified public accounting firm was engaged to perform audits of UMUC Ventures and its subsidiaries' financial statements for fiscal years 2017 and 2018. Since these are not State entities, the financial activity of these entities is not subject to audit by the Office of Legislative Audits.

Status of Findings From Preceding Audit Report

Our audit included a review to determine the status of the three findings contained in our preceding audit report dated June 8, 2015. As disclosed in the following table, we determined that UMUC satisfactorily addressed two of these findings. The remaining finding is repeated in this report.

Status of Preceding Findings		
Preceding Finding	Finding Description	Implementation Status
Finding 1	Security and access controls over certain UMUC systems were not sufficient.	Not repeated
Finding 2	UMUC workstations and servers were not sufficiently protected against malware.	Repeated (Current Finding 3)
Finding 3	Service level agreements and related independent reports did not address certain security and operational risks.	Not repeated

Findings and Recommendations

Student Residency Status

Finding 1

The University of Maryland University College (UMUC) did not establish a process for independent reviews of students granted military residency status.

Analysis

UMUC did not have a process to independently verify the propriety of students granted military residency status. For tuition purposes, UMUC students are classified as an in-state resident, an out-of-state resident, or as military. Although UMUC used output reports to verify the propriety of in-state classifications to supporting documentation on a test basis, the propriety of military status granted to students was not similarly verified.

UMUC students eligible for military status are generally required to submit supporting documentation from the military, such as an enlistment agreement. Students must also submit documentation of their expected date of separation from the military for entry into UMUC's records as a means for UMUC to determine when military status is no longer appropriate. The required documentation is reviewed by admissions staff when recording critical data relating to a student's military status in the system. However, UMUC did not use available automated output reports to independently verify the propriety of students granted military status, including the accuracy of related data recorded in the system, through a review of supporting documentation, at least on a test basis.

Ensuring that students are assigned the correct residency status is critical since tuition costs charged to a student vary greatly depending on the assigned status. For example, the undergraduate tuition rate for students with military status was \$250 for each credit taken during the 2018-2019 academic year, whereas the undergraduate tuition rate for students with out-of-state status was \$499 for each credit. Tuition charges for in-state and military status were generally comparable.

According to its records, during fiscal year 2018, UMUC's tuition revenue totaled \$330.7 million, of which \$51.3 million was for students with military status. During the spring 2018 semester, 12,139 (22 percent) of enrolled students at UMUC were classified as military.

Recommendation 1

We recommend that UMUC use available automated output reports to verify to supporting documentation the propriety of students granted military status, at least on a test basis.

Employee Termination Payments

Finding 2

UMUC made termination payments totaling \$292,000 to a former employee that were not consistent with UMUC's policy on such payments.

Analysis

UMUC made termination payments totaling \$292,000 to a former exempt employee during our audit period that were not consistent with UMUC's *Policy on Separation for Regular Exempt and Overseas Staff Employees*, under which the payments were made. According to the *Policy*, which has been approved by the Board of Regents (BOR), regular exempt employees serve on an at-will basis and their employment may be terminated at any time by either the employee or UMUC. The *Policy* provides that, upon involuntary separation by UMUC other than for cause, such as for gross misconduct, the employee shall be provided with a period of notice during which the employee may be placed on administrative leave with pay for part or all of the period of notice. The length of this period is dependent on the employee's length of service, and ranges between one and 12 months.

We reviewed five payments made to employees under this *Policy* totaling approximately \$733,000. Our review of supporting documentation disclosed that payments made to one such employee, totaling \$292,000, were not made in accordance with the *Policy*. Specifically, the documentation of this employee's separation from UMUC on June 30, 2018 stated that the employee voluntarily resigned and included an agreement releasing UMUC from any future claims by the employee. Under these circumstances, the employee would not be eligible for compensation under the *Policy*, which addresses only involuntary separations; nevertheless, the agreement indicated that the separation payments were made under this *Policy*.

The payments, totaling \$292,000, included two components: (1) \$221,000, disbursed in July 2018, as compensation for the 8-month period from July 1, 2018 through March 2, 2019; and (2) \$71,000 for additional administrative leave for the 3 months preceding the employee's termination. In total, the employee received compensation for 11 months of administrative leave under what was documented

as a voluntary separation, notwithstanding the fact that, based on this employee's length of service, the *Policy* would have only provided a maximum of 9 months of leave for an involuntary separation.

While the termination documentation supports that this was a voluntary termination, UMUC subsequently advised us that it actually did involuntarily terminate this employee. However, UMUC lacked documentation that this was anything other than a voluntary termination. UMUC believes that the *Policy* can be reasonably interpreted to include circumstances in which an employee facing involuntary termination requests to resign in lieu of termination and UMUC may agree to accommodate this request under the *Policy on Separation*. Since the *Policy* provides for a period of notice to the employee only upon involuntary separation, absent specific clarifying language by the BOR, we question UMUC's interpretation of the *Policy*.

Recommendation 2

We recommend that UMUC

- a. formally clarify its *Policy* regarding the permissibility of making payments described above and seek approval from the BOR, or refrain from making termination payments under the *Policy* to regular exempt employees who voluntarily resign;**
- b. ensure that the administrative leave payments resulting from the application of this *Policy* are consistent with an employee's length of service; and**
- c. absent retroactive approval from the BOR in the form of clarifying language confirming UMUC's interpretation of this *Policy*, pursue recovery of the \$292,000 paid under this voluntary separation.**

Information Systems Security and Control

Background

UMUC has outsourced all of its critical information technology (IT) functions to third party service providers. The UMUC internal network, the associated wide area network locations in the United States, Europe, and Asia, and numerous support servers were maintained by an infrastructure service provider. The described network locations serve the broader UMUC student body and provide UMUC students with IT resources and classroom space. Per its November 2018 records, the infrastructure service provider maintained 179 servers within UMUC's Maryland administrative offices in Adelphi and a backup datacenter located in Largo, with 326 additional supported servers residing with a cloud hosting service provider. Other critical IT functions outsourced by UMUC

include its financial, human resources, payroll and student information services systems. These systems are maintained and operated by a combination of outside service providers.

UMUC's online education function is heavily reliant on information technology for providing an interactive classroom experience to its students and faculty. Online education services range from supplementing traditional classroom sessions to providing complete course delivery elements, including learning materials, instructor and student interactions, and class work submissions. The online educational courses serve students around the world and account for a significant portion of UMUC's revenues. UMUC's online education services are delivered using a software as a service platform, provided by a third party service provider.

Finding 3

Certain malware protection controls did not exist for numerous UMUC computers to provide adequate assurance that the computers were properly protected from security risks.

Analysis

Certain malware protection controls did not exist for numerous UMUC computers to provide adequate assurance that the computers were properly protected from security risks. As of December 2018, UMUC utilized approximately 2,400 active computers per its infrastructure service provider's records. We noted the following conditions:

- UMUC did not have malware protection software installed on all of its active computers. UMUC's infrastructure service provider advised us that almost all servers using a specific operating system software product did not have malware protection software installed. Per the infrastructure service provider's April 2019 records, 202 servers existed which utilized this operating system software. Servers without installed malware protection software operate at increased risks of being compromised. A similar condition was commented upon in our prior audit report.
- UMUC's infrastructure service provider advised us that, generally, host-based firewalls were not enabled on UMUC laptops. We were advised that, according to the service provider's records query as of January 16, 2019, across the world there were 1,420 laptops defined to UMUC's network management software. Although provider records did not quantify the number of laptops without enabled host-based firewalls, if these laptops were

used outside of the UMUC global network locations, those without such firewalls would be susceptible to attack from untrusted traffic.

The University System of Maryland (USM) *IT Security Standards* state that institutions must implement controls to detect and prevent malware and operate host-based firewalls on laptop computers operated outside of secured USM networks.

Recommendation 3

We recommend that UMUC ensure that

- a. malware protection software is installed and maintained on all UMUC servers (repeat), and**
- b. all laptop computers are protected by an enabled and properly configured host-based firewall.**

Outsourced IT Functions

Background

Having outsourced all of its critical IT functions, UMUC entered into service provider service level agreements (which defined the terms and controls requirements for the contractual services) for the operation and maintenance of its critical financial, human resources, payroll, student information, and online learning environment systems. To provide assurance that the terms of these service agreements were complied with, the service providers procured and obtained independent System and Organization Controls (SOC) reviews and related SOC 2 Type 2 reports which included descriptions of the service providers' controls and security procedures, and the results of tests designed to ensure that these controls and security procedures were effective for designated periods. We reviewed the independent reports issued for two service providers responsible for the maintenance and operation of the financial, human resources, payroll, student information, and online learning environment systems.

Finding 4

For UMUC's outsourced IT functions, the two SOC reports we reviewed did not address certain IT security and operational controls.

Analysis

For UMUC's outsourced IT functions, two SOC 2 Type 2 reports did not address certain IT security and operational controls. Without complete and comprehensive SOC 2 Type 2 reviews and reports, UMUC lacked assurance that all necessary IT security controls existed to ensure the security and availability of

these two critical systems. Specifically, as examples, we determined the independent SOC report for the student information system did not address whether UMUC production data was stored separately from non-production environments and from other customers of the provider. Additionally, the recent SOC report for UMUC's online learning environment system did not indicate whether network controls restricting access between trusted and untrusted network segments were tested and whether audit logs recording security-related activities were retained and reviewed on a regular basis. We provided UMUC with complete lists of significant security controls that were not addressed by the independent SOC reviews and reports.

The USM *IT Security Standards* for cloud technology services requires, for third party contracts, that institutions review and assess independent control reports to determine whether service providers are adequately protecting institutional information.

Recommendation 4

We recommend that UMUC, for its various IT service providers, obtain and assess the related independent SOC reports to ensure the independent reviews addressed all critical security and operational controls, including ensuring corrective actions are taken for any reported issues, with these assessments being documented and retained.

Audit Scope, Objectives, and Methodology

We have conducted a fiscal compliance audit of the University System of Maryland (USM) - University of Maryland University College (UMUC) for the period beginning July 1, 2014 and ending September 30, 2018. The audit was conducted in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

As prescribed by the State Government Article, Section 2-1221 of the Annotated Code of Maryland, the objectives of this audit were to examine UMUC's financial transactions, records, and internal control, and to evaluate its compliance with applicable State laws, rules, and regulations.

In planning and conducting our audit, we focused on the major financial-related areas of operations based on assessments of significance and risk. The areas addressed by the audit included purchases and disbursements, student accounts receivable, cash receipts, information systems security and control, payroll, student financial aid, and corporate purchasing cards. We also determined the status of the findings contained in our preceding audit report.

Our audit did not include an evaluation of financial transactions, records, and internal controls and an assessment of compliance with State laws, rules, and regulations with respect to UMUC's Asian and European Divisions. These Divisions, which according to UMUC's records accounted for approximately 2.2 percent and 2.9 percent of UMUC's fiscal year 2018 revenues, respectively, are reviewed on a triennial basis by the USM internal auditors on whose work we relied to reduce the scope of our audit work.

In addition, our audit did not include certain support services provided to UMUC by the USM Office, such as endowment accounting, and by the University of Maryland, College Park (UMCP), such as certain payroll processing functions. These support services are included within the scope of our audits of the USM Office and UMCP, respectively. Furthermore, our audit did not include an evaluation of internal controls over compliance with federal laws and regulations for federal financial assistance programs and an assessment of UMUC's compliance with those laws and regulations because the State of Maryland engages an independent accounting firm to annually audit such programs administered by State agencies, including the components of the USM.

To accomplish our objectives, our audit procedures included inquiries of appropriate personnel, inspections of documents and records, observations of UMUC's operations, and tests of transactions. Generally, transactions were selected for testing based on auditor judgment, which primarily considers risk. Unless otherwise specifically indicated, neither statistical nor non-statistical audit sampling was used to select the transactions tested. Therefore, the results of the tests cannot be used to project those results to the entire population from which the test items were selected.

We also performed various data extracts of pertinent information from the State's Financial Management Information System (such as revenue and expenditure data) and the State's Central Payroll Bureau (payroll data), as well as from the contractor administering the State's Corporate Purchasing Card Program (credit card activity). The extracts are performed as part of ongoing internal processes established by the Office of Legislative Audits and were subject to various tests to determine data reliability. We determined that the data extracted from these various sources were sufficiently reliable for the purposes the data were used during this audit. We also extracted data from UMUC's financial systems for the purpose of testing certain areas, such as financial aid and student accounts receivable. We performed various tests of the relevant data and determined that the data were sufficiently reliable for the purposes the data were used during the audit. Finally, we performed other auditing procedures that we considered necessary to achieve our audit objectives. The reliability of data used in this report for background or informational purposes was not assessed.

UMUC's management is responsible for establishing and maintaining effective internal control. Internal control is a process designed to provide reasonable assurance that objectives pertaining to the reliability of financial records; effectiveness and efficiency of operations, including safeguarding of assets; and compliance with applicable laws, rules, and regulations are achieved.

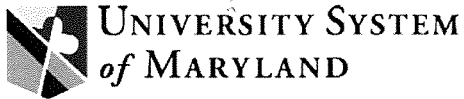
Because of inherent limitations in internal control, errors or fraud may nevertheless occur and not be detected. Also, projections of any evaluation of internal control to future periods are subject to the risk that conditions may change or compliance with policies and procedures may deteriorate.

Our reports are designed to assist the Maryland General Assembly in exercising its legislative oversight function and to provide constructive recommendations for improving State operations. As a result, our reports generally do not address activities we reviewed that are functioning properly.

This report includes findings relating to conditions that we consider to be significant deficiencies in the design or operation of internal control that could adversely affect UMUC's ability to maintain reliable financial records, operate effectively and efficiently, and/or comply with applicable laws, rules, and regulations. Our report also includes findings regarding significant instances of noncompliance with applicable laws, rules, and regulations. Other less significant findings were communicated to the UMUC that that did not warrant inclusion in this report.

The response from the USM Office, on behalf of UMUC, to our findings and recommendations is included as an appendix to this report. As prescribed in the State Government Article, Section 2-1224 of the Annotated Code of Maryland, we will advise the USM Office regarding the results of our review of its response.

APPENDIX



3300 METZEROTT ROAD // ADELPHI, MD 20783

WWW.USMD.EDU // 301.445.2740

OFFICE OF THE CHANCELLOR

October 23, 2019

Mr. Gregory A. Hook, CPA
Legislative Auditor
Office of Legislative Audits
State Office Building, Room 1202
301 West Preston Street
Baltimore, MD 21201

Re: University System of Maryland – University of Maryland
University College
Period of Audit: July 1, 2014 through September 30, 2018

Dear Mr. Hook:

I have enclosed the University System of Maryland's responses to your draft report covering the examination of the accounts and records of the University System of Maryland – University of Maryland University College (now officially University of Maryland Global Campus). Our comments refer to the individual items in the report.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'Robert L. Caret'.

Robert L. Caret
Chancellor

Enclosures

cc: Mr. Javier Miyares, President, University of Maryland Global Campus
Ms. Lisa Kemp, Senior Vice President, Administration and Finance and Chief Financial Officer,
University of Maryland Global Campus
Ms. Linda R. Gooden, Chair, University System of Maryland Board of Regents
Mr. Robert L. Page, Associate Vice Chancellor for Financial Affairs, USM Office
Mr. David Mosca, Director of Internal Audit, USM Office

**University System of Maryland
University of Maryland University College**

Agency Response Form

Student Residency Status

Finding 1 The University of Maryland University College (UMUC) did not establish a process for independent reviews of students granted military residency status.
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We recommend that UMUC use available automated output reports to verify to supporting documentation the propriety of students granted military status, at least on a test basis.

Agency Response			
Analysis			
Please provide additional comments as deemed necessary.			
Recommendation 1	Agree	Estimated Completion Date:	09/5/2019
Please provide details of corrective action or explain disagreement.	A periodic review of supporting documentation for military status students will be performed on a test basis at the end of each term. The first review was conducted in September 2019 for the summer term.		

**University System of Maryland
University of Maryland University College**

Agency Response Form

Employee Termination Payments

Finding 2

UMUC made termination payments totaling \$292,000 to a former employee that were not consistent with UMUC's policy on such payments.

We recommend that UMUC

- a. formally clarify its *Policy* regarding the permissibility of making payments described above and seek approval from the BOR, or refrain from making termination payments under the *Policy* to regular exempt employees who voluntarily resign;**
- b. ensure that the administrative leave payments resulting from the application of this *Policy* are consistent with an employee's length of service; and**
- c. absent retroactive approval from the BOR in the form of clarifying language confirming UMUC's interpretation of this *Policy*, pursue recovery of the \$292,000 paid under this voluntary separation.**

See response below:

**University System of Maryland
University of Maryland University College**

Agency Response Form

Agency Response	
Analysis	
Please provide additional comments as deemed necessary.	The University disagrees with this finding. The employee referenced in this finding was released by the President and as stated in the release was “permitted to resign” in lieu of termination. This was not a voluntary resignation. The period of notice provided to this employee was within the President’s discretion and consistent with the policy.

Auditor’s Comment: UMUC disagrees that the referenced employee was voluntarily separated from employment with UMUC because the employee was permitted to resign in lieu of termination. As noted in the audit report, the cited UMUC *Policy* provides only for administrative leave for employees involuntarily separated for reasons other than for cause and, in our opinion, a resignation does not qualify as an involuntary termination. Furthermore, as UMUC was unable to provide any documentation as to the circumstances of the employee’s termination, our finding is consistent with the known facts. In spite of this disagreement, UMUC does agree to clarify the *Policy* and seek Board of Regents approval for the revised *Policy*.

Recommendation 2a	Disagree	Estimated Completion Date:	
Please provide details of corrective action or explain disagreement.	<p>The employee referenced in this finding was released by the President and as stated in the release was “permitted to resign” in lieu of termination. This was not a voluntary resignation. Even though we disagree with the finding because it was explicit in the release that the employee was “permitted to resign”, UMUC will clarify the policy regarding the permissibility of making payments under these circumstances and seek approval from the BOR.</p> <p>The policy referenced in this finding, UMUC Policy VII-1.22-UC, permits an employee at the Senior Vice President level to be provided a period of notice at the discretion of the President:</p> <p>At the discretion of the President or designee, in consultation with the CHRO and UMUC Office of Legal Affairs, an employee who is involuntarily separated at or above the Assistant Vice President or Assistant Vice Provost level may be provided a period of notice.</p> <p>This policy was approved by the University System of Maryland Board of Regents on April 21, 2017. (See agenda item at this link: https://www.usmd.edu/BORPortal/Materials/2017/FB/20170421/ps_2.f.x.pdf).</p>		

**University System of Maryland
University of Maryland University College**

Agency Response Form

	Prior to submission to the Board of Regents, this policy was approved for form and legal sufficiency by the Office of Attorney General.
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Auditor's Comment: UMUC disagrees that the length of the period of notice (and associated administrative leave payment) provided to this employee was inconsistent with the *Policy*, and asserts that the period of notice is at the discretion of the President. We acknowledge the discretion implicit in the referenced Policy, but continue to believe that the period of notice and administrative leave payment provided to this terminated employee was inconsistent with the plain language of the *Policy*, which establishes the period of notice based on the employee's length of service.

Recommendation 2b	Disagree	Estimated Completion Date:	
Please provide details of corrective action or explain disagreement.	The employee's length of service is not applicable at the Senior Vice President level under UMUC Policy VII-1.22-UC , the policy provides discretion to the President in determining the period of notice.		
Recommendation 2c	Disagree	Estimated Completion Date:	
Please provide details of corrective action or explain disagreement.	This was not a voluntary separation, therefore would not warrant recovery of the amount paid or retroactive approval from the BOR.		

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Information Systems Security and Control

Finding 3

Certain malware protection controls did not exist for numerous UMUC computers to provide adequate assurance that the computers were properly protected from security risks.

We recommend that UMUC ensure that

- a. malware protection software is installed and maintained on all UMUC servers (repeat), and**
- b. all laptop computers are protected by an enabled and properly configured host-based firewall.**

See response below:

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Analysis			
Please provide additional comments as deemed necessary.			
Recommendation 3a	Disagree	Estimated Completion Date:	FY20
Please provide details of corrective action or explain disagreement.	<p>The servers in one of UMUC's environment are running a specific operating system (OS) and are configured and operating effectively with current, vendor supported anti-malware software. A different UMUC server environment, running another OS identified by the auditor, does not have anti-malware software installed due a risk based decision. One of the criteria for deploying the latter OS was based on the fact it is known to be more secure and less susceptible to malware attacks. To further harden this OS and mitigate the risk of malware infections, UMUC implements a defense-in-depth strategy, to include:</p> <ul style="list-style-type: none"> HIPS Periodic vulnerability scanning, and integrity monitoring Automated and manual monitoring of the servers <p>UMUC is confident that these measures have significantly reduced the overall risk of malware attacks in the environment.</p> <p>To enhance our security posture, UMUC is in the process of testing a malware protection solution to determine the impact to the UMUC environment. Results of our initial testing have seen some degradation in performance. UMUC will continue to test malware protection solution(s) to determine the impact to the UMUC environment and perform a cost/benefit analysis. We anticipate completing this work in FY20.</p>		

Auditor's Comment: UMUC disagrees with the finding stating that it made a risk based decision to deploy the operating system that does not have malware protection software installed, due to the fact that the system itself is deemed more secure and less susceptible to malware attacks. UMUC also states that it has implemented a defense-in-depth strategy and that these measures have significantly reduced the overall risk of malware attacks. OLA continues to believe, and UMUC has not been able to refute, the basic premise that servers without installed malware protection software operate at increased risks of being compromised. Nevertheless, UMUC does agree with the related recommendation and is in the process of testing malware protection solutions.

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Recommendation 3b	Agree	Estimated Completion Date:	FY20
Please provide details of corrective action or explain disagreement.	UMUC is in the process of evaluating host-based firewalls and determining the impact to the environment.		

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Outsourced IT Functions

Finding 4

For UMUC's outsourced IT functions, the two SOC reports we reviewed did not address certain IT security and operational controls.

We recommend that UMUC, for its various IT service providers, obtain and assess the related independent SOC reports to ensure the independent reviews addressed all critical security and operational controls, including ensuring corrective actions are taken for any reported issues, with these assessments being documented and retained.

Agency Response			
Analysis			
Please provide additional comments as deemed necessary.			
Recommendation 4	Disagree	Estimated Completion Date:	FY20
Please provide details of corrective action or explain disagreement.	<p>UMUC does not agree with the finding. A SOC 2 audit was performed by a reputable 3rd party auditor using criteria established by the American Institute of Certified Public Accountants (AICPA) and OLA in its own language considers the AICPA SOC a reliable and industry-wide used standard. The 2 SOC reports identified no control deficiencies for either vendor. Additionally, UMUC has a formalized process for requesting SOC's for critical systems on an annual basis. SOC's are reviewed and issues are raised to UMUC upper management in the event the auditor identifies control deficiencies. While UMUC does not agree with the finding, UMUC is in the process of requesting both vendors to include the controls identified by OLA to be included in the next SOC audit. One of the vendors has agreed to have its auditor perform additional control testing in its next SOC audit. It's important to note that UMUC does not have the authority to compel vendors to conduct specific control testing beyond what is recommended by the AICPA. UMUC is confident in AICPA's SOC process and will not terminate our relationship with the vendor solely upon its refusal to conduct control testing that falls outside of AICPA's scope.</p>		

Auditor's Comment: UMUC does not agree with the finding, stating that the SOC reports did not identify control deficiencies for either vendor. OLA provided UMUC with complete lists of significant security controls that were not addressed by the

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independent SOC reviews and reports. Nevertheless, UMUC has taken steps to implement the recommendation and is in the process of requesting both vendors to include the identified controls in its next SOC audit.

AUDIT TEAM

Robert A. Wells, Jr., CPA
Audit Manager

Richard L. Carter, CISA
R. Brendan Coffey, CPA, CISA
Information Systems Audit Managers

Mindy R. Garrett
Senior Auditor

J. Gregory Busch, CISA
Edwin L. Paul, CPA, CISA
Information Systems Senior Auditors

Stephen R. Alexander
Syed M. A. Taqvi, CPA
Staff Auditors

Peter W. Chong
Joseph R. Clayton
Michael A. Kirschbaum
Information Systems Staff Auditors