



Office of Internal Audit

Audit of the FIU Online Program

Report No. 17/18-03

November 14, 2017

Date: November 14, 2017
To: Joseph Riquelme, Interim Assistant Vice President – FIU Online
From: Allen Vann, Audit Director
Subject: **Audit of the FIU Online Program, Report No. 17/18-03**



We have completed an audit of the FIU Online Program for the period from July 1, 2015 through January 31, 2017. Enrollment in online courses has been steadily increasing. Distance learning fees, the focus of our audit, totaled \$25 million. Our primary objective was to evaluate whether revenue and expenditure streams were properly accounted for and were applied towards their intended educational activities.

Our audit disclosed that although the established procedures for administering the distance learning fee have improved since our last audit, a large fund balance continues to be maintained which will require management to monitor future fees with the goal of minimizing the fund balance and a number of prior audit recommendations had not been fully implemented. In addition, expenditures and operational controls and procedures need strengthening particularly in the proper use of the distance learning fee and the payroll approval process. We also identified Information Technology areas that need strengthening particularly in performing vulnerability scans, accounting for endpoint devices sent to surplus, and business continuity plan testing. The audit resulted in seven recommendations, which management agreed to implement.

We would like to take this opportunity to express our appreciation for the cooperation and courtesies extended to us during this audit.

Attachment

C: FIU Board of Trustees
Mark B. Rosenberg, University President
Kenneth G. Furton, Provost and Chief Operating Officer
Kenneth A. Jessell, Chief Financial Officer and Senior Vice President
Javier I. Marques, Chief of Staff, Office of the President
Elizabeth Bejar, Vice President for Academic Affairs
Barbara Manzano, Assistant Vice Provost Planning & Finance

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OBJECTIVES, SCOPE AND METHODOLOGY

Pursuant to our approved annual plan for 2016-2017, we have completed an audit of FIU Online for the period from July 1, 2015 through January 31, 2017. The primary objective of our audit was to evaluate whether revenue and expenditure streams were properly accounted for and were applied towards their intended educational activities and to ensure controls are: (1) adequate and effective; (2) being adhered to; and (3) in accordance with University policies and procedures, State and Federal laws and regulations; and (4) to follow-up on prior audit recommendations.



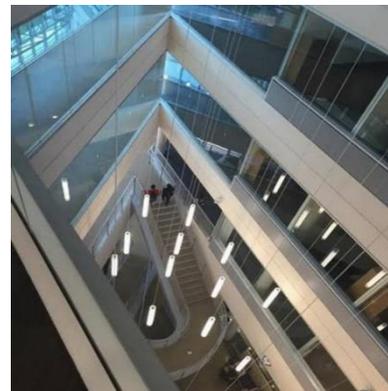
The audit was conducted in accordance with the *International Standards for the Professional Practice of Internal Auditing*, and included tests of the accounting records and such other auditing procedures, as we considered necessary under the circumstances. To accomplish specific Information Technology control objectives, we applied a governance, risk and compliance framework, which utilizes the *Control Objectives for Information and Related Technology (COBIT) 5.0 Framework*

and the *National Institute of Standards and Technology (NIST) Special Publication 800-53A, Revision 4 - Assessing Security and Privacy Controls in Federal Information Systems and Organizations*. Audit fieldwork was conducted from March through August 2017.

During the audit, we focused on the financial transactions for distance learning courses covered under Florida Statute Section 1009.24(17) and the Information Technology controls to ensure the confidentiality, availability, and integrity of FIU Online data. Continuing education, market rate credit programs, and hybrid programs were not included in our review. We reviewed University policies and procedures, and applicable Federal and State laws and regulations, observed current practices and processing techniques, interviewed responsible personnel, and tested selected transactions and devices. Samples sizes and number of samples selected for testing were determined on a judgmental basis.

As part of our audit, we reviewed internal and external audit reports issued during the last four years to determine whether there were any prior recommendations related to the scope and objectives of this audit and whether management had effectively addressed prior audit concerns. An internal report was issued in April 2013, Report No. 12/13-10, Audit of the FIU Online Program. The findings and recommendations therein, were examined to ensure management had effectively addressed prior audit concerns.

These findings are addressed throughout this report and summarized in Section II.

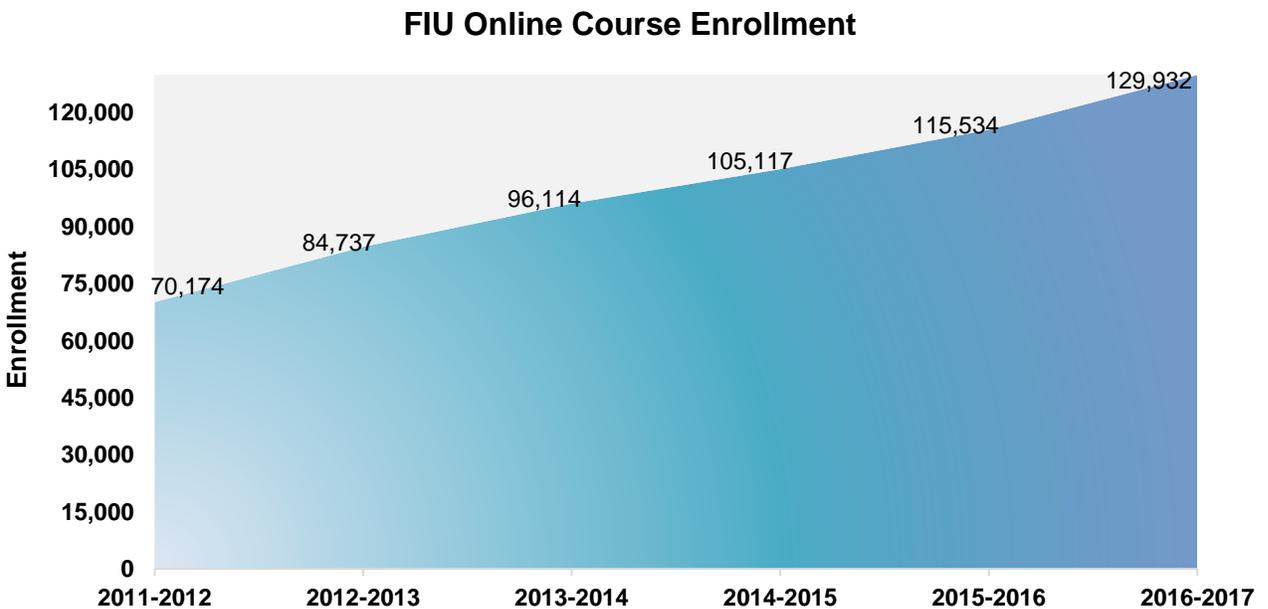


BACKGROUND

FIU Online has been offering online learning since 1998. In 2009, FIU Online enhanced its focus to offer both online courses as a complement to on-site students, as well as fully online programs. Its mission is to design, develop and manage online courses -- both credit and non-credit, certificates and degree programs.

FIU Online is composed of distance learning courses, which are completely online,¹ continuing education programs, market rate credit programs and hybrid programs. FIU now has over 50 programs that can be completed almost entirely online.

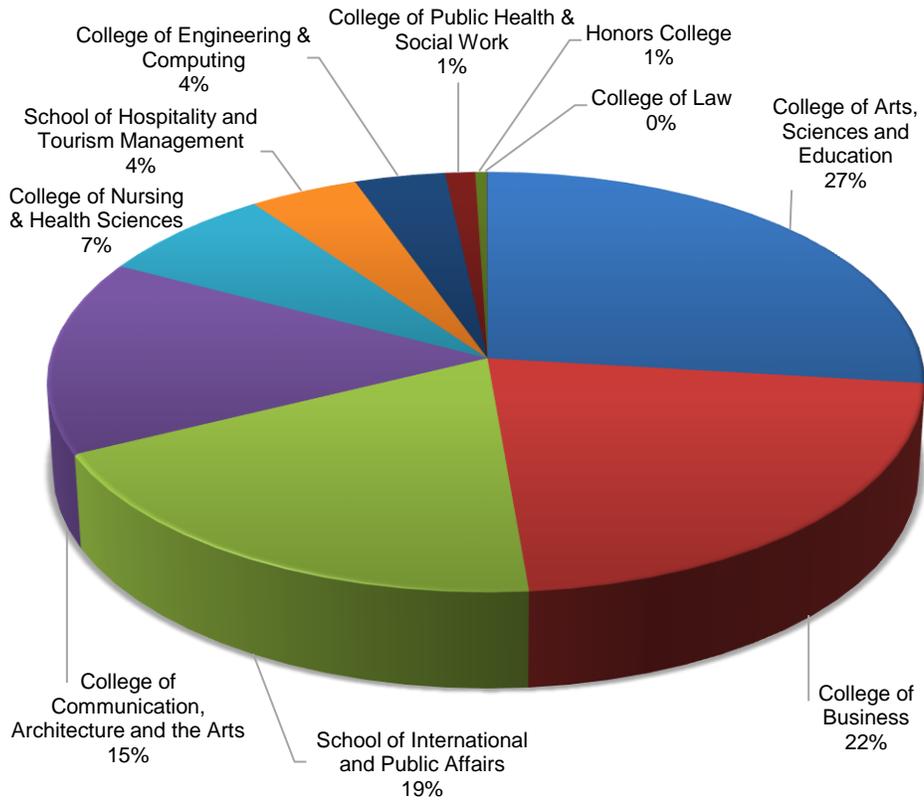
During the audit, we focused on the distance learning courses. Enrollment in online courses has been consistently increasing since our prior audit, as shown below:



¹ Online means being connected to, served by, or available through a computer or telecommunications system with an Internet connection. Florida Statute defines a distance learning course as a course in which at least 80 percent of the direct instruction of the course is delivered using some form of technology when the student and instructor are separated by time and/or space.

During our audit period, 10 academic units offered online courses, including distance learning courses covered under Florida Statute Section 1009.24(17). The online course enrollment by academic unit for the 2015-2016 year is depicted in the following graph as a percentage of total enrollment.

2015-2016 Academic Year Enrollment



Distance Learning Fee Governance

FIU’s Board of Trustees approved the collection of a distance learning fee per Florida Statute Section 1009.24 - *State University Student Fees*. Pursuant to Section 1009.24(17)(a):

“A state university may assess a student who enrolls in a course listed in the distance learning catalog, established pursuant to §1006.735, a per-credit-hour distance learning course fee. The average distance learning fee amount assessed by a state university may not exceed \$30 per-credit-hour.”

Further, Section 1009.24(17)(b) states:

“The amount of distance learning course fee may not exceed the additional costs that are attributable to the distance learning course. If the distance learning course fee is assessed by a state university, the institution may not assess duplicative fees to cover the additional costs.”

Although the maximum average \$30 per-credit-hour fee was approved by the Florida Legislature effective July 1, 2016, and was in effect during part of our audit period, the Legislation did not provide for a specified fee effective July 1, 2017.

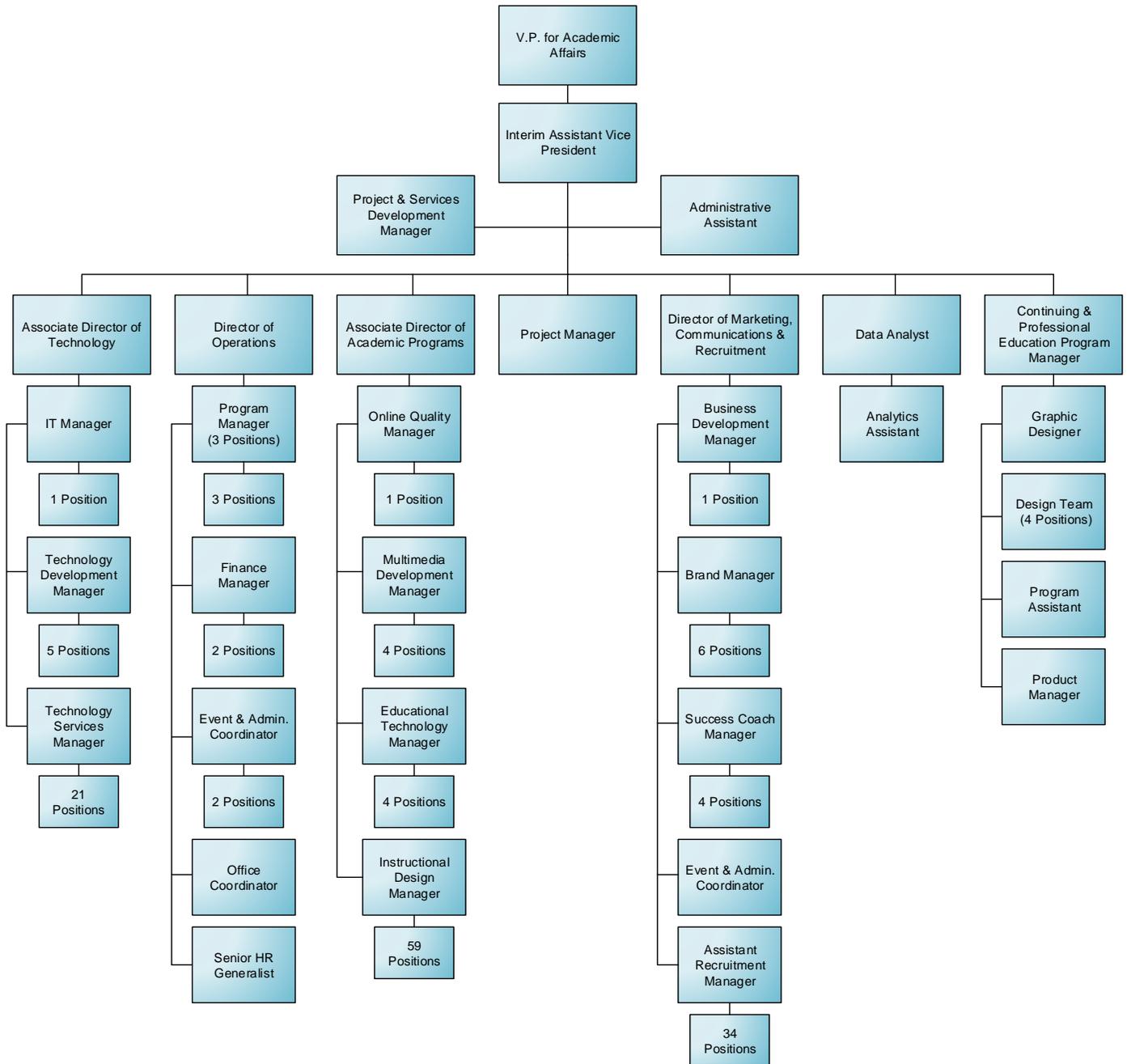
A Florida Distance Learning Task Force (FDLTF) created by the 2008 Legislature was appointed by the Chancellors of the State University System (SUS) and the Florida College System with specific legislative assignments, which included the facilitation of increased cost-effectiveness in developing and delivering distance learning degree programs and courses. The FDLTF made several recommendations in its final report including the identification of permissible expenses based on the type of distance learning delivery and administrative structure of the university.

FIU Online has adopted the recommendations made by the FDLTF, which are followed as a guideline of permissible costs related to developing and delivering distance learning courses. In addition, since our last audit FIU Online has implemented an expense guideline policy for the academic units, which is consistent with the Florida Statutes and the FDLTF report.

At FIU, revenue collected from the distance learning fee is shared between FIU Online and the academic units offering the distance learning courses. Up to 25 percent of the fees collected from the distance learning courses have been set aside for the academic units. These are used to support their faculty who develop and deliver such online courses and to provide student support that is unique to these online courses.

Personnel

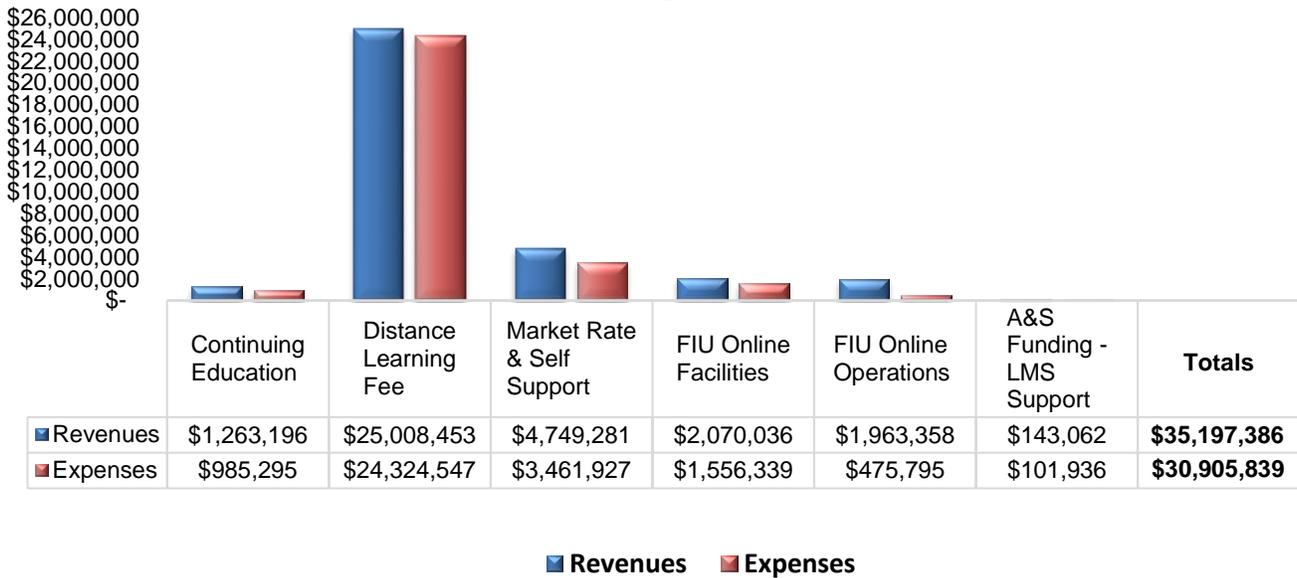
As of March 2017, FIU Online had 182 employees organized as follows:



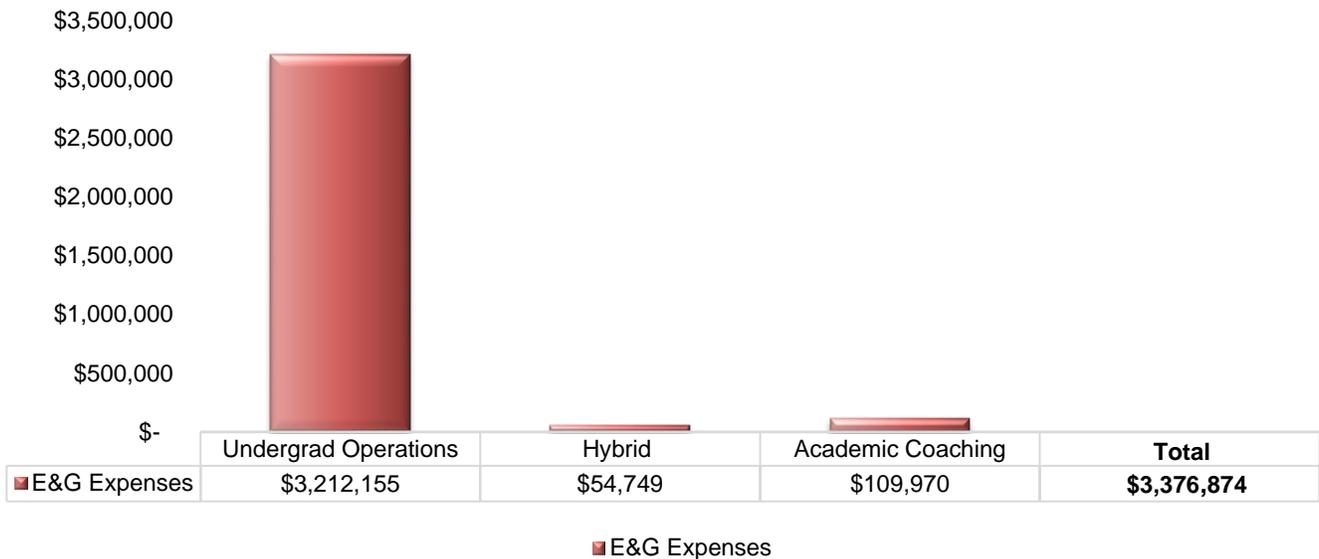
Financial Details

During our audit period from July 1, 2015 through January 31, 2017, FIU Online revenues and expenses from Auxiliary funds and Education and General (E&G) funds, were as follows:

Auxiliary Funds



E&G Funds



Since the majority of FIU Online revenues and expenses are generated from the distance learning program, our audit focused on transactions related to the distance learning courses. In addition, as the E&G funds were new since our last audit, we performed additional testing over the FIU Online Undergrad Operations activity.

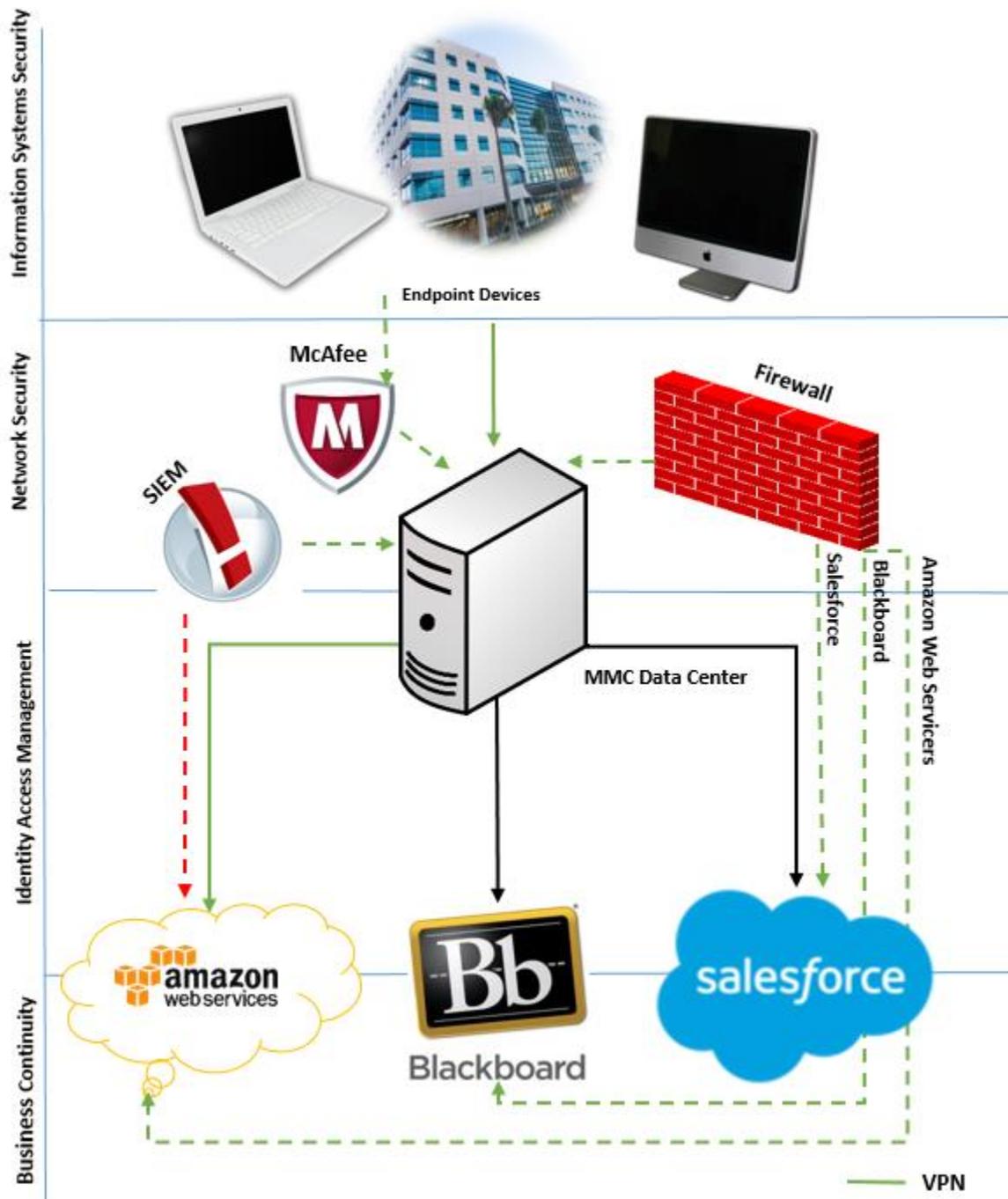
FIU Online Distance Learning generated total revenues of \$25 million. It expended \$24.3 million, including transfers of \$7.9 million (\$4.9 million transferred to participating academic units, \$2 million transferred to the FIU Online Facilities auxiliary account as part of the funding for the construction of the new MANGO building, and approximately \$1 million transferred to FIU Online Operations auxiliary). (See page 13 for additional details).

Distance Learning - FIU Online		
July 1, 2015 through January 31, 2017		
	Amount	Percentage
Revenues:		
Self-Supporting/Cost Plus	\$ 24,078,522	96%
Sale of Service	667,069	3%
Transferred In	239,744	1%
DSO Non-Operating Revenue	23,118	0%
Total Revenues	\$ 25,008,453	100%
Expenses:		
Salaries and Benefits	\$ 11,383,711	47%
Other Operating Expenditures:		
Transferred Out	\$ 7,910,527	33%
Software Licenses	1,176,338	5%
Shared Service Fee	1,058,686	4%
Contractual Services	972,191	4%
Materials and Supplies	240,201	1%
Travel	235,352	1%
Rental of Facilities	225,048	1%
Bad Debt Expense	216,222	1%
Utilities	181,217	1%
Computer Equipment	170,239	1%
Repairs and Maintenance	147,522	1%
Miscellaneous	141,213	0%
Rental of Buildings	109,820	0%
Subscription, Memberships & Dues	84,959	0%
Catering and Events	48,114	0%
Depreciation Expense	12,926	0%
Rental of Equipment	10,261	0%
<i>Total Other Operating Expenditures</i>	<i>\$ 12,940,836</i>	<i>53%</i>
Total Expenses	\$ 24,324,547	100%
Excess of Revenues over Expenses	\$ 683,906	
Beginning Fund Balance, July 1, 2015	4,344,850	
Ending Fund Balance, January 31, 2017²	\$ 5,028,756	

² FIU Online's Excess of Revenues over Expenses from July 1, 2016 - January 31, 2017 totaled \$975,254. The fund balance as of January 31, 2017 includes revenues collected from the Spring 2017 semester. However, each semester after the 25% drop date, FIU Online will transfer distance learning fees to the Academic Units, as such, Spring 2017 disbursement amounts are not included as part of the January 31, 2017 fund balance.

Data Process Flow Overview

Information Technology controls are divided into four sections: Information Systems Security, Network Security, Identity Access Management, and Business Continuity.



FINDINGS AND RECOMMENDATIONS

Our audit disclosed that FIU Online's established procedures for administering the distance learning fee have improved. Nevertheless, a large fund balance continues to be maintained which will require management to monitor future fees with the goal of minimizing the fund balance. In addition, expenditures and operational controls and procedures need strengthening particularly in the proper use of the distance learning fee and the payroll approval process. We also identified Information Technology areas that need strengthening particularly in performing vulnerability scans, reconciliation of endpoint devices sent to surplus, and business continuity plan testing. In addition, although all prior audit recommendations were previously reported as implemented by management, we found that 14 recommendations were fully implemented but 12 were not fully implemented.

Our overall evaluation of internal controls is summarized in the table below.

INTERNAL CONTROLS RATING			
CRITERIA	SATISFACTORY	FAIR	INADEQUATE
Process Controls	x		
Policy & Procedures Compliance		x	
Effect		x	
Information Risk		x	
External Risk		x	
INTERNAL CONTROLS LEGEND			
CRITERIA	SATISFACTORY	FAIR	INADEQUATE
Process Controls	Effective	Opportunities exist to improve effectiveness	Do not exist or are not reliable
Policy & Procedures Compliance	Non-compliance issues are minor	Non-compliance Issues may be systemic	Non-compliance issues are pervasive, significant, or have severe consequences
Effect	Not likely to impact operations or program outcomes	Impact on outcomes contained	Negative impact on outcomes
Information Risk	Information systems are reliable	Data systems are mostly accurate but can be improved	Systems produce incomplete or inaccurate data which may cause inappropriate financial and operational decisions
External Risk	None or low	Moderate	High

SECTION I
Financial and Operational Controls

Detailed below are the areas identified by our audit testing where opportunities for improvement exist.

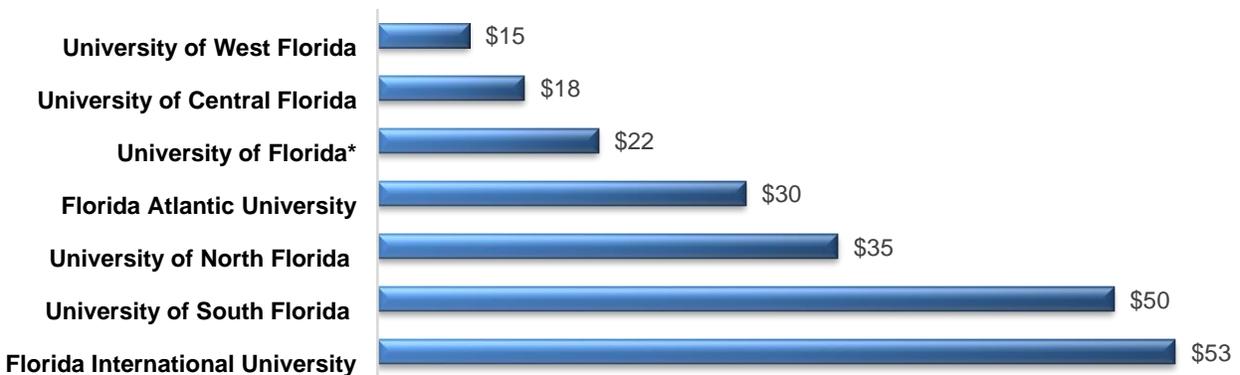
1. Revenues and Fund Balances

Most institutions have implemented a distance learning course fee to support the additional costs of developing and delivering quality online courses and programs, leading to a realization that providing quality online education has a cost structure that differs from the face-to-face environment. As the number of students participating in online education in Florida has grown over the years, a better understanding of the actual cost of online education has been reached.

During the first 12 months of our audit period, FIU's distance learning fee was assessed at \$53.33 per-credit-hour and was subsequently reduced by nearly 44 percent to \$30.00 per-credit-hour beginning July 1, 2016, as mandated by the Legislature.

The chart below provides a fee per-credit-hour comparison among other Florida State University System (SUS) institutions during the 2015-2016 academic year, as documented in the *Cost of Online Education Report* presented to the Florida Board of Governors.

Distance Learning Fee (Per-Credit-Hour) 2015-2016

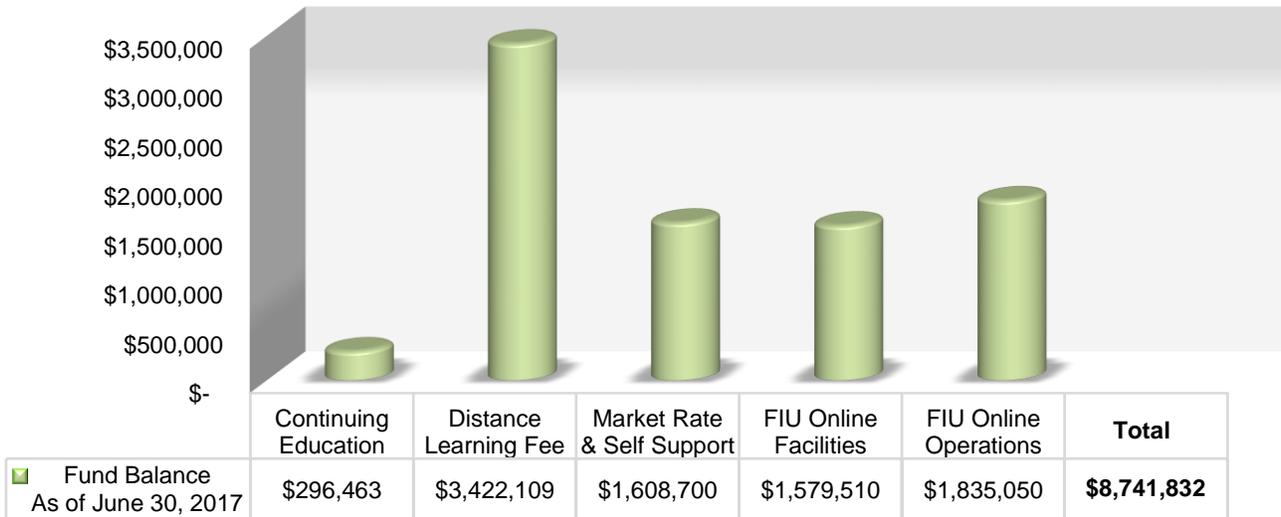


* Note: UF distance learning fee varies by degree programs, the average distance learning course fee was \$22.01.

During our audit period, distance learning revenues totaled \$25 million. Based on our analysis of data enrollment we determined that the appropriate amount of fees were collected and recorded.

The fund balances as of June 30, 2017 for FIU Online Auxiliary funds are summarized below:

FIU Online Auxiliary Fund Balances

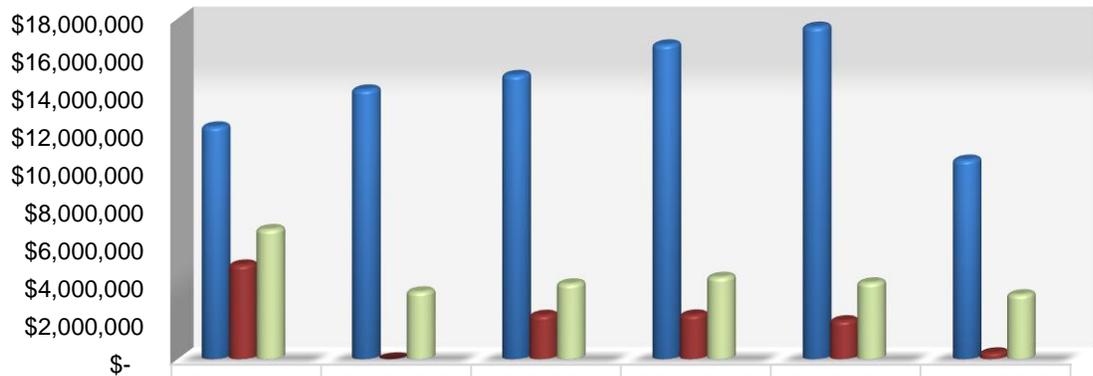


Florida Statute 1009.24(17)(b) states that the amount of the distance learning course fee may not exceed the additional costs that are attributable to the distance learning course. Thus, in theory the program should break even, similar to all auxiliary fund accounts.

As noted in the FIU Auxiliary Operating Guidelines, funds generated for credit academic activities are restricted in that fees charged should approximate costs with reserves generally allowed for working capital needs and future capital outlays. Accumulating general reserve to guard against adverse market demand conditions or to fund new auxiliary opportunities are expressly prohibited. Our review of the Distance Learning Fee fund balance in the following graph shows that the resulting fund balance from such activity continues to reflect a significant excess, and are primarily reduced by funds set aside to fund capital projects.

Since our prior audit, the distance learning fee was reduced from \$58 to \$53.33 per-credit-hour. Subsequently, the fee was reduced to \$30 per-credit-hour, which impacted the revenues generated in 2016-17 by approximately \$7 million.

Distance Learning Fee Revenue and Fund Balance



	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
Revenue	\$12,297,373	\$14,249,581	\$15,020,391	\$16,630,196	\$17,570,698	\$10,542,170
Net Transfers for Capital Projects	\$5,000,000	\$(750,000)	\$2,334,352	\$2,351,884	\$2,044,728	\$337,756
Fund Balance	\$6,873,660	\$3,573,785	\$3,998,642	\$4,344,850	\$4,053,050	\$3,422,109
DL Fee Per-Credit-Hour	\$58.00	\$58.00	\$53.33	\$53.33	\$53.33	\$30.00

■ Revenue
 ■ Net Transfers for Capital Projects
 ■ Fund Balance

In addition, part of the fund balance that is maintained was used for the construction of the new MANGO (Management and New Growth Opportunity) building that opened in November 2015. The \$35 million, six-story building, houses the School of Accounting, the Department of Management and International Business and the College of Business Academic Advising Office. Two floors are dedicated to FIU Online. From 2011-2017 approximately \$11.3 million was transferred from the Distance Learning Fee fund to the FIU Online Facilities fund for capital project expenditures, which included \$9.4 million for the construction of the building and \$900,000 for other facilities-related expenditures. In addition, \$1 million remains in the FIU Online Facilities fund balance as of June 30, 2017 originally transferred from the Distance Learning Fee fund.

Our review of expenditures discussed in Finding No. 2 of this report indicated that 30% of total expenditures tested, including 81% of payroll tested, either did not comport with the program's criteria, as described under the FDLTF Report, or were not properly allocated amongst the FIU Online programs. However, even though a loss of \$631,000 was recorded for the fiscal year ended June 30, 2017 (based on the \$30 per-credit-hour fee), as noted in the last audit report a large fund balance continues to be maintained.

Recommendation

FIU Online should:

1.1

Continue to monitor the distance learning fee with the goal of minimizing the fund balance.

Management Response/Action Plan:

- 1.1 Management concurs with this recommendation and implementation was completed. FIU has an established process for establishing the DL Fee. The process is as follows: FIU Online will develop their Distance Learning Fee Budget. Once finalized, budgeted expenses and projected Student Credit Hours associated to the Distance Learning Fee will be used to determine whether the Distance Learning Fee should be adjusted. FIU Online had completed this process and planned to reduce the fee for 2016-17. The state provided guidance on a rate for the 2016-17 DL Fee that FIU implemented. The Distance Learning Fee was reduced from \$53.33 to \$30 per-credit-hour. This reduced revenue by \$7M and resulted in a negative cash flow, thereby lowering the fund balance in fiscal year 2016-17. We are forecasting the fund balance will continue to be depleted in fiscal year 2017-18. We expect this trend to continue until economies of scale are achieved once again at the new Distance Learning Fee rate.

Implementation Date: Immediately

2. Expenditure Controls

Use of Distance Learning Fee

The Florida Distance Learning Task Force's (FDLTF) Report outlining the permissible and non-permissible costs related to distance learning courses are shown below:

Permissible
<ul style="list-style-type: none">• Specialized technology and maintenance (e.g., hardware, software licenses; technology consulting; hosting and network services)• Development and/or acquisition (licensing) of instructional content for distance learning courses• Distance learning program development and accreditation• Distance learning program quality assessment and control• Faculty development and support for distance learning courses• Distance learning student support services• Test facilities and support• Distance learning administrative & operating costs• Course management system servers, database, and support staff• Instructional material
Non-Permissible
<ul style="list-style-type: none">• Instruction Cost• Any costs covered by other fees (health, activity, technology, etc.)• Costs not associated with the development and delivery of eligible distance learning courses

The results of our review of expenditures is divided below, as follows: (a) FIU-Online - Distance Learning; (b) FIU-Online - Educational & General; and (c) Academic Units.

a) FIU Online - Distance Learning Expenditures

During our audit period, total FIU Online expenditures were \$24.3 million, of which \$19.3 million were payroll related expenditures and transfers out. From the remaining \$5 million, we selected 66 expenditure transactions, totaling \$1,385,830 (28%), for testing. These transactions were tested for compliance with University policies and procedures and applicable laws, rules, and regulations. We found exceptions in 45 of the 66 (68%) transactions, as outlined in the various categories below. The vast majority of the exceptions found were related to expenditures that were not properly allocated amongst all directly benefiting FIU Online programs, even though we note a considerable part of such expenditures would ultimately pertain to the distance learning fee program.

Travel Expenditures

Of the 66 transactions selected for testing, 12 transactions, totaling \$45,305, were related to travel expenditures. Exceptions relating to travel disbursements are listed below:

- The University's Travel and Other Expenses Manual (Travel Manual) states that the most economical means should be considered for hotel accommodations. Justification is required if the hotel rate is in excess of \$200. However, no such justification is required if the rate complies with the U.S. General Services Administration (GSA) rates. Additionally, If the stay is at the official hotel where conference/convention is held and the rate claimed is less than or equal to the stated conference/convention rate, justification is not needed.

Of the 12 hotel invoices included in the transactions selected, 10 invoices, totaling \$17,863, reflected hotel rates ranging from \$205 to \$459 per night. The rate per night exceeded the \$200 per night threshold and the allowable GSA rate. In addition, since the stay was not at the official hotel of the conference, justification was required. However, no documentation was provided.

- We found four instances, totaling \$4,870, where the best available price for conference registration fee was not utilized. FIU Online could have saved \$900 had the discounted rate for Education, Government, and Non Profit been used for the Adobe Max conferences registration fees.
- The Travel Manual maintains a list of all non-allowable expenses for which travel expenses are not reimbursable. Specifically noted as non-allowable is room service charges. During the audit, we found one instance where a room service charge, totaling \$70, was charged to the University's credit card.
- An approved Travel Authorization (TA) is the traveler's permission to incur expenses and travel on behalf of the University. This includes employees and students traveling on behalf of the University. Payment of travel expenses using the procurement card or by the traveler is prohibited without an approved TA.

We found eight instances within four Expense Reports (ER), totaling \$6,059, where airline travel and/or conferences registration fees were paid without an approved TA.

- The Travel Manual indicates that after returning from a trip or incurring an expense, reimbursement is made by completing an ER with accompanying receipts. The ER must be submitted within 10 days after the completion of the trip or incurrence of the expense. Likewise, the employee submitting the ER and all related supporting documentation certifies that the information provided therein is an accurate record of the expenses incurred. The ER must list all expenses associated with the trip, whether paid directly by the University or reimbursable to the traveler.
 - We found five instances where the ERs, totaling \$15,818, were submitted 3, 5, 8, 19, and 116 business days late, after the completion of the trip.

- We also found one instance, totaling \$118, where expenses charged to the hotel room were not included in the ER for the trip. The exclusion of the expenses from the ER does not allow for an accurate review or record of the expenses incurred.

In addition, we found one instance where a prepaid hotel charge of \$1,317 was more than the actual costs due to the transfer of travel arrangements from one employee to another, which resulted in a shorter stay. As a result, a \$777 credit was issued but was posted to the Market Rate & Self-Support account when it should have been posted to Distance Learning Fee account, where the original charge was posted.

Credit Card and Other Purchases

Of the remaining 54 transactions selected for testing, 27 transactions, totaling \$123,566, were credit card purchases and 27 transactions, totaling \$1,216,959, were related to other purchases. We found 34 exceptions (63%) in which purchases benefited all FIU Online operations and/or in which purchases were non-permissible under the FDLTF guidelines.

- 31 instances, totaling \$378,722, in which purchases benefited all FIU Online operations, and were not properly allocated amongst the programs. Although the vast majority of FIU Online operations is composed of the distance learning program, these expenditures should have been allocated amongst the other online programs that also received a direct benefit from the expenditures listed below.
- 3 instances, totaling \$4,943, in which purchases were non-permissible under the FDLTF guidelines.

These 34 exceptions are further detailed in the table below:

Schedule of Exceptions – Benefits all FIU Online Distance Learning Related Expenditures	
Description	Amount
1 payment for <i>Tableau</i> Software, an analytic tool software that benefits all FIU Online operations.	\$101,602
7 payments for operational costs such as phone equipment, laptops, and monitors. The products benefit all FIU Online operations.	93,022
13 payments for Amazon cloud web service. This web service benefits all FIU Online operations.	81,167
1 payment in relation to IT virtual environment, which benefits all FIU Online operations.	50,000
5 payments for team meeting events. Team meetings are held for all FIU Online staff, which benefits all FIU Online operations.	24,990
2 payments in relation to <i>Bamboo</i> HR Software and Salesforce License. Bamboo HR software and Salesforce benefits all FIU Online operations.	10,729
1 Rental payment for offsite location at Blue Lagoon. FIU Online and market rate program employees occupied this location.	12,217
1 Call center service payment for FIU Online survey, which benefits all FIU Online courses.	4,995
Total	\$378,722

Schedule of Exceptions – Non-Permissible Distance Learning Related Expenditures	
One payment for clip lenses with logo imprint purchased for the FIU Online Annual Conference event. Promotional advertising with logo print is not an allowable expense under the FDLTF guidelines.	\$4,194
Two catering event payments in relation to hybrid sessions for FIU Online. Hybrid expenses are not related to distance learning courses, thus, it is not an allowable expense under the FDLTF guidelines.	749
Total	\$4,943

Payroll Related Expenditures

During our audit period, salaries and fringe benefits were approximately \$11,383,711, or 47 percent of the total FIU Online distance learning program expenditures. Our review of payroll expenditures focused primarily on the approval process (see Finding No. 3) and salaries paid from the distance learning program, which results are found below.

We selected 10 salary and 5 hourly employees with salaries and fringe benefits totaling \$1,360,417. The testing of all 10 salary employees, with salaries and fringe benefits, totaling \$1,310,167, found that they worked not only for the distance learning program but also for the other Online programs; however, their costs were not allocated accordingly.

Schedule of Exceptions – FIU Online Payroll Related Expenditures	
Description	Amount
Eight administrators’ salaries and benefits and one 12-month faculty member. <ul style="list-style-type: none"> ▪ Their position relates to the entire online program, including distance learning, continuing education, hybrid courses, and market rate courses/programs. 	\$1,078,406
One administrator’s salary and benefits. <ul style="list-style-type: none"> ▪ Their position relates to the continuing education program. 	19,825
Total	\$1,098,231

b) FIU Online - Educational & General (E&G) Expenditures

During our audit period, total E&G expenditures totaled \$3,212,155, of which \$2,275,576 were payroll related expenditures. The payroll approval process for these payroll related expenditures was examined as part of Finding No. 3. From the remaining \$936,579, we selected 24 expenditure transactions for testing, totaling \$608,379 (65%), and found no exceptions. In addition, we tested three travel related expenditures, totaling \$24,475 (3%). These transactions were tested for compliance with University policies and procedures and applicable laws, rules, and regulations.

Of the \$24,475 in travel related expenditures tested, we found the following exceptions:

- One instance of a \$68 charge for excess baggage without justification.

- We found one instance, totaling \$576, where the airline ticket was paid without an approved TA. On the same trip, a hotel reservation, totaling \$1,195, was made prior to the TA's approval.

c) Academic Unit Expenditures

As previously mentioned, Florida Statute Section 1009.24(17)(a) allows the University to charge a distance learning fee for all online courses that generate fundable student credit hours. Up to 25 percent of the fees collected from the distance learning courses have been set aside for the academic units. These are used to support their faculty who develop and deliver such online courses and to provide student support that is unique to these online courses.

Effective summer 2015, FIU Online created a departmental guideline policy for the distribution of the distance learning fee to the academic units consistent with Florida Statutes and the FDLTF Report.

Per the policy, each academic unit is eligible to receive up to 25 percent of their respective distance learning fee. In order to receive the funds, each academic unit must complete and submit a distance learning fee Budget Request Template to FIU Online with appropriate supporting documentation detailing their planned expenditures for the distance learning fee for the fiscal year. Revision to the distance learning fee Template is accepted until May 31 of the fiscal year for which the request is intended. Expenses contained within these budget requests must not exceed the distance learning fee allocation estimate provided by FIU Online and must be in line with expense guidelines described below. FIU Online will then approve the annual budget request after consultation with the academic unit, if necessary. Each semester, after the University's 25 percent course drop date³, FIU Online transfers the distance learning fee revenue to the academic units based on actual enrollment up to the approved annual budget amount that the academic unit is eligible to receive.

Each academic unit that receives funding from the distance learning fee is required to send actual expenditure support to FIU Online and expenditures should be in accordance with the expense guidelines listed below:

- Development, recording, and/or acquisition (licensing) of instructional content for online courses.
- A faculty stipend for development of an online course up to \$3,000 per course.
- Faculty training and development that is related to the design, development, and delivery of online courses.
- Assistance for online course sections on condition that the same assistance is not provided for face-to-face (FTF) sections of the same course.
- Credentialed Academic Coaches.
- Student support services that are only offered to online students.
- Virtual proctored exams.

³ This is the last day to withdraw from the University with a 25% refund of tuition.

- Bonus of up to \$1,000 to faculty who successfully complete the Quality Matters certification process for their online courses.
- Salary for administrative personnel whose sole responsibility is for the oversight, quality control, and management of the development and scheduling of online courses

In our prior audit, we tested expenses within the College of Arts, Sciences and Education, and the College of Business, as they generated almost two thirds of the distance learning program revenue. During the current audit, we examined the College of Nursing & Health Sciences and the College of Communication, Architecture and the Arts (CARTA), which combined generated 24 percent of the distance learning program revenue. We reviewed the expenditures submitted to FIU Online and found improvements in the process. The set of guidelines mentioned above provided much needed guidance to the academic units. The results of our review of the academic units' expenditures follows:

- For the fiscal year 2015-2016, the College of Nursing & Health Sciences had total net expenditures of \$201,786, of which payroll related expenditures accounted for \$184,969 (92%). We selected five employees, totaling \$182,365, and found no exceptions.
- For the fiscal year 2015-2016, CARTA had total expenditures of \$819,511, of which payroll related expenditures accounted for \$702,031 (86%). We selected six non-payroll transactions for testing, totaling \$48,173, and selected 22 employees, totaling \$540,111, for payroll testing.

We found exceptions in four of the six (67%) non-payroll transactions, totaling \$8,173. These four transactions had very little to no direct benefit to CARTA distance learning program activities, as follows:

Schedule of Exceptions – FIU CARTA Non-Payroll Related Expenditures	
Description	Amount
Two payments for honorarium and professional speakers in relation to Symposium Architecture events. Events are not directly related to online programs.	\$5,179
Two payments for the creation and subscription of <i>Inspicio</i> application. The application includes e-magazine publications for all of CARTA, which is not directly related to online programs.	2,994
Total	\$8,173

We also found two employees with salaries and fringe benefits, totaling \$68,133, who had very little to no direct benefit to CARTA distance learning program activities.

Schedule of Exceptions – FIU CARTA Payroll Related Expenditures	
Description	Amount
One temporary employee’s salary and benefits. <ul style="list-style-type: none"> ▪ A contract payment for the temporary employment of an affiliate of the Miami Beach Urban studios which served both: Student taking online courses and face-to-face courses. 	\$61,974
One staff employee’s salary and benefits. <ul style="list-style-type: none"> ▪ Employee provides academic advising for all students at CARTA. 	6,159
Total	\$68,133

In addition, our Office recently completed an audit of the Chaplin School of Hospitality and Tourism Management (CSHTM), (see Report No. 16/17-06, dated November 15, 2016). While that audit covered CSHTM’s overall financial and operational controls, we found similar conditions to those reported above. During the fiscal year 2015-2016, the CSHTM expended “distance learning fees totaling \$94,448 that were used to purchase equipment with very little to no direct benefit to the CSHTM’s distance learning program activities”.

Based on our review of FIU Online Distance Learning and academic unit expenditures we found \$1,558,202, or 30% of total expenditures tested, including 81% of payroll tested, that either did not comport with the program’s criteria, or were not properly allocated amongst the benefiting programs.

Notwithstanding, since our previous audit recommendation, we noted an improvement in the FIU Online distribution process for the academic units. However, FIU Online needs to continue to monitor how it allocates these expenditures and ensure academic units are spending these funds to benefit the distance learning program activities.

Recommendations

FIU Online should:	
2.1	Work with the Provost’s Office to ensure that distance learning funds are: a) used for the development and delivery of the distance learning program; b) properly allocated; and c) expended by academic units in accordance with FIU Distance Learning Policy.
2.2	Ensure compliance with University Travel policies and procedures and Florida Statute 112.061. In most of the circumstances identified, compliance would require explanation and/or justification of expenses, use of the most economical fees/rates, and timely submittal of TAs and ERs.

Management Response/Action Plan:

2.1 Management concurs with this recommendation. FIU Online's funding became more diverse in 2016-17 due to additional services provided (i.e., hybrid course development and support). As a result, FIU Online began allocating expenses in July 2016 and full implementation will be completed in 2017-18.

Implementation Date: April 30, 2018

2.2 Management concurs with this recommendation and this practice has already been implemented. FIU Online began implementing internal controls addressing these travel findings in May 2017 as a result of an internal departmental audit. FIU Online will continue to enforce the University's guidelines and ensure that any exceptions are appropriately explained and justifications are provided as supporting documentation.

Implementation Date: Immediately

3. Personnel Administration

Payroll Approval Process

The University's payroll guidelines require managers/proxies to have first-hand knowledge of the employee's work and/or leave hours or obtain written confirmation from the employee's supervisor of the hours being reported prior to approving the payroll.

In March 2016, FIU Online began using an independent software known as *Bamboo* where employees input their time-off request and submit their time to the supervisor for approval. As a result, if there is a proxy approving the time-off in PantherSoft, the supervisor's approval would be reflected in Bamboo. Supervisor/proxies review the time off requested in Bamboo with the time off input into PantherSoft.

We reviewed time and attendance records from July 1, 2015 through January 31, 2017, which included 39,278 transactions. Our review revealed that:

- 2,948 (8%) of the transactions tested were approved by a proxy and not approved by the direct managers/supervisor. (1,343 of these transactions were approved prior to March 2016, and 1,605 of the transactions were approved after March 2016). In light of the findings below, proxy approval may not provide for accurate leave records.
- 2,682 (7%) of the transactions were approved by default by the University's Payroll Department without FIU Online's approval of the worked or leave hours.
- An employee approved their own time in 6 (<1%) transactions.

In addition, we reviewed the time reported in Bamboo to the time reported in PantherSoft and selected 20 employees to ensure the time was properly authorized and reflected in PantherSoft. We found that:

- 16 of the 20 employees had reported 598 hours of sick, vacation or other time in Bamboo that was not reported in PantherSoft. The total cost of the time not reported equates to \$23,964 based on June 2017 compensation rates.
 - 67 out of the 598 hours reported as "Other" in Bamboo should have been reported as vacation/annual leave time in PantherSoft, while 32 hours was reported in Bamboo as vacation time but was reported as sick time in PantherSoft.

Management subsequently informed us that they had external evidence that employees had actually worked 29 of the 598 leave hours reported in Bamboo but not in PantherSoft.

- The 20 employees had 823.50 leave hours reported in PantherSoft that were not reflected in Bamboo.

The FIU Online payroll approval process continues to need strengthening. This was also a prior audit recommendation. The absence of an adequate payroll approval process leaves the University vulnerable to paying employees additional time off that should be recorded and deducted from an employee's accrual balance in PantherSoft. The inaccuracy of leave time records can be costly in the long term.

Recommendation

FIU Online should:	
3.1	Ensure that the managers/proxies either have first-hand knowledge of the employee's hours or written confirmation from the employee's supervisor of the hours being reported prior to approving the payroll.

Management Response/Action Plan:

3.1 Management concurs with this recommendation and FIU Online will audit conflicts between time requested/approved in Bamboo HR and time entered in PantherSoft HR. These conflicts will be reviewed every pay period to ensure discrepancies are addressed and resolved prior to approval deadline. Additionally, FIU Online is correcting all time discrepancies identified in this audit and will ensure that both systems reconcile for all employees.

Implementation Date: Immediately

4. Asset Management

Per the University's Asset Management records as of March 1, 2017, FIU Online had 23 capital assets with associated costs totaling \$256,332. All FIU Online capital assets were accounted for during the audit period without exception.

In addition, FIU Online is responsible for tracking its attractive/sensitive property, such as laptops, desktops, and iPads that cost less than \$5,000, and are particularly vulnerable to theft and misuse, as required by the University Property Manual. FIU Online had 396 such attractive property items, which included 38 unassigned laptops and iPads that are used as loaners during conferences and as backups for employees. We selected 24 items for physical observation and determined that controls over attractive property assignment and tracking need improvement. We found three instances where the attractive property listing was not updated and the items selected did not agree to the department or employee on the attractive property listing.

Recommendation

FIU Online should:	
4.1	Update and maintain the attractive property listing.

Management Response/Action Plan:

4.1 Management concurs with this recommendation. FIU Online does update and maintain an attractive property listing. One of the instances was a timing issue in the attractive property listing being updated by FIU Online and the snapshot that was taken for this audit. FIU Online will add to the update and maintenance process a quarterly audit of the attractive property listing.

Implementation Date: December 1, 2017

5. Distance Learning Course Requirements

A distance learning course is a course in which at least 80 percent of the direct instruction of the course is delivered using some form of technology when the student and instructor are separated by time and/or space.

Since our prior audit, management has improved the process to ensure the 80 percent rule by requiring no more than two on-campus visits for distance learning courses. FIU Online reviews the course syllabus to determine if courses classified as distance learning courses meet the two on-campus visits requirement.

To determine if the distance learning courses met the 80 percent rule, we reviewed syllabi for 25 courses and observed that all, except 2 courses, involved two or less on-campus visits. The 2 courses (both from the College of Arts, Sciences & Education - Department of Mathematics & Statistics) required students to appear on campus to take three or more exams, and provided no virtual alternative, in direct violation of the FIU Online policy. Although the policy allows the dean to approve exceptions, no exceptions were approved for the 2 courses found.

Recommendation

FIU Online should:	
5.1	Develop an enforcement mechanism to ensure the College of Arts, Sciences & Education complies with the on-campus and proctoring guidelines. If the course includes on-campus visits, the syllabus must state equal local/virtual alternatives are provided for any student who requests them, regardless of that student's place of residence.

Management Response/Action Plan:

5.1 Management concurs with this recommendation and FIU Online Instructional Designers will review course syllabi and report findings to their managers.

Implementation Date: January 8, 2018

SECTION II
Summary of Prior Audit Recommendations

6. Summary of Prior Audit Recommendations

The prior FIU Online audit report, dated April 15, 2013, contained 26 recommendations, which management had since reported as fully implemented. Our examination of these recommendations included observation of actual processes, interviews with University personnel and testing of selected transactions and devices.

The recommendations relating to Financial and Operational Controls were addressed within Section I of this report and the current observations are summarized below, while those relating to Information Technology Controls are fully addressed below.

Overall, our examination revealed that 14 recommendations were fully implemented, while 11 were partially implemented and 1 recommendation was not implemented, as follows:

Summary of Prior Audit Recommendations				
No.	Recommendation	Implementation Status		
		Fully	Partially	Not
1. Controls Over Revenue and Fund Balance				
1.1	Reevaluate distance learning fees based on: (a) the permissible additional cost of services limited to the development and delivery of the distance learning courses; and (b) the minimization of fund balances.		✓	
1.2	Reconcile distance learning fee revenue against actual student enrollment data in a timely manner, at a minimum on a semester basis. Any reconciling items should be investigated and resolved.	✓		
2. Control Over Expenditures				
2.1	Establish and disseminate comprehensive written distance learning expenditure guidelines in accordance with Florida Statutes and giving due consideration to the guidance provided in the report issued by the Legislature's Florida Distance Learning Task Force.	✓		

Summary of Prior Audit Recommendations				
No.	Recommendation	Implementation Status		
		Fully	Partially	Not
2.2	Ensure that the distance learning funds are only used for the development and delivery of eligible distance learning courses and not used to supplement or supplant funding for other University needs.		✓	
2.3	Establish better documentation of allocating distance learning fee related expenditures.	✓		
3. Distance Learning Course Requirements				
3.1	Ensure that at least 80% of the direct instruction of the course is delivered online in order to meet the distance learning course requirements.		✓	
4. Accounting and Financial Reporting				
4.1	Ensure that all distance learning fee related expenditures are fully accounted for in its distance learning fee auxiliary account.	✓		
4.2	Reimburse College of Business Administration for the payroll expenses paid for the Quality Assurance Manager and transfer the Manager to FIU Online payroll.	✓		
4.3	Reimburse College of Business Administration for MARC building rent paid.	✓		
4.4	Execute a rental agreement with FIU Foundation for MARC building space occupied.	✓		
5. Payroll Approval				
5.1	Ensure that employees' work and leave hours are properly approved by the supervisor who has knowledge of their work and/or leave hours.		✓	

Summary of Prior Audit Recommendations				
No.	Recommendation	Implementation Status		
		Fully	Partially	Not
6. Systems Security				
6.1	Work with the IT Security Office to ensure that all workstations are not infected by malicious code and perform periodic vulnerability scans in the future.		✓	
6.2	Update all workstations to the operating system's current service pack.		✓	
6.3	Work with the UTS Network Services Department to ensure that all folders and hard drives of the workstations are encrypted.		✓	
6.4	Work with the UTS Media Sanitization Department to classify the sensitivity of the information systems that are sent to surplus along with the total number of devices and reconcile the total number of sanitized information systems.		✓	
6.5	Follow appropriate measures for information systems that were stolen.	✓		
7. Network Security				
7.1	Work with UTS Network Security and System Engineering to review and appropriately limit Amazon Web Services Cloud egress network traffic.			✓
8. Access Controls				
8.1	Work with the FIU Compliance Office to determine if there are any legal or regulatory guidelines to be included in the IT Operational Handbook.	✓		
8.2	Document a frequency of the IT Operational Handbook being reviewed and updated.	✓		
8.3	Remove terminated user accounts; disable application developer, web designer and consultant user accounts in the production environment.	✓		

Summary of Prior Audit Recommendations				
No.	Recommendation	Implementation Status		
		Fully	Partially	Not
8.4	Review and rename or disable non-unique user accounts where applicable.	✓		
8.5	Review the workstations with generic local administrator accounts and either remove or rename them to uniquely identifiable user accounts.		✓	
8.6	Increase the minimum password age and enable password complexity requirements.	✓		
9. Business Continuity				
9.1	Perform a formal business impact analysis for all critical business operations to ensure the effectiveness of these strategies to recover critical services and processes.		✓	
9.2	Include the disaster recovery plan's key personnel during testing to ensure the plan's effectiveness.	✓		
9.3	Formalize test scripts and results.		✓	

Listed below are the recommendations that were determined not to be fully implemented. For Financial and Operational Controls, a summary of the current observation can be found below, along with a reference to the current Finding. For Information Technology Controls, the results of our current observations can be found below.

Prior Recommendations Partially Implemented or Not Implemented:

Financial and Operational Controls

- **Recommendation No. 1.1** – Reevaluate distance learning fees based on: (a) the permissible additional cost of services limited to the development and delivery of the distance learning courses; and (b) the minimization of fund balances.

Management's Reported Actions:

Permissible items have been adjusted, forecasted expenses have been reviewed and distributed over forecasted enrollment and therefore, the Distance Learning Fee will be reduced beginning Fall 2013 to \$53.33 per-credit-hour.

Reported Implementation Date:

November 18, 2013

Current Observation:

As noted in Finding No.1, since our prior audit, the distance learning fee was reduced from \$58 to \$53.33, and then to \$30 per-credit-hour. As a result, FIU Online had a \$631,000 loss in their most current fiscal year. Nonetheless, a large fund balance continues to be maintained.

- **Recommendation No. 2.2** – Ensure that the distance learning funds are only used for the development and delivery of eligible distance learning courses and not used to supplement or supplant funding for other University needs.

Management's Reported Actions:

Guidelines were distributed for feedback in February 2013. New controls will be finalized to ensure distributions of expenses are proportionate to program cost.

Reported Implementation Date:

November 8, 2013

Current Observation:

Based on our overall review from distance learning expenditures, we found exceptions with 30% of expenditures tested, which either did not comport with the program's criteria or were not properly allocated amongst all directly benefiting FIU Online programs, as further detailed in Finding No. 2.

- **Recommendation No. 3.1** – Ensure that at least 80% of the direct instruction of the course is delivered online in order to meet the distance learning course requirements.

Management's Reported Actions:

New Exam Policy for online courses was introduced for Fall 2012 to address Distance Learning Fee requirements. An audit schedule, consisting of a sample size of course syllabi, will be implemented to verify course compliance.

Reported Implementation Date:

November 8, 2013

Current Observation:

Since our prior audit, we noted an improvement in the process where a new exam policy was introduced in Fall 2012 to address the distance learning fee requirements. However, our testing found courses that did not comply with the new exam policy, as detailed in Finding No. 5.

- **Recommendation No. 5.1** – Ensure that employees' work and leave hours are properly approved by the supervisor who has knowledge of their work and/or leave hours.

Management's Reported Actions:

FIU Online has implemented a Time Off Request system in Sales force. This provides visibility for employees' time off request and the ability to select a delegate to approve on behalf of the supervisor when necessary.

Reported Implementation Date:

April 15, 2013

Current Observation:

In March 2016, FIU Online began using a software called *Bamboo*, as a time-off request system. We reviewed the time off requested in Bamboo and noticed that in certain situations time reported in Bamboo did not reconcile to time reported in PantherSoft. Also, time reported in PantherSoft did not reconcile to Bamboo. FIU Online payroll approval process continues to need strengthening, as described in Finding No. 3.

Information Technology Controls

- **Recommendation No. 6.1** – Work with the IT Security Office to ensure that all workstations are not infected by malicious code and perform periodic vulnerability scans in the future.

Management's Reported Actions:

We are under the University Active Directory and the McAfee ePolicy Orchestrator (ePO) software, which centralizes and streamlines management of endpoint, network, and content security. This helps the IT Security office, push security updates and pinpoint if our workstations are infected. They then contact us to make us aware of

the infections so that we can clean the workstation. We will also be performing periodic vulnerability scans.

Reported Implementation Date:

April 15, 2013

Current Observation:

According to the FIU Online IT Associate Director, the workstations from the prior audit had been sent to surplus. During our audit period, 9 out of 11 endpoint devices examined were properly configured. However, we found 1 workstation did not have Data Loss Prevention (DLP) installed and 1 workstation did not have the automatic update feature correctly configured. FIU Online should work with Network Security to ensure that the identified devices are not affected by malicious code. Additionally, we found periodic vulnerability scans are not performed, which reduces FIU Online ability to ensure that their endpoint devices are secure.

- **Recommendation No. 6.2** – Update all workstations to the operating system’s current service pack.

Management’s Reported Actions:

We have immediately commenced to perform a check on all of our machines to ensure that all operating systems have the current service packs.

Reported Implementation Date:

November 8, 2013

Current Observation:

3 out of 6 workstations examined were missing either the operating system or office application’s critical updates. FIU Online IT Associate Director stated that the 3 workstations identified are used as testing devices which contributed to the lack of necessary updates as they are not always powered on. Upon review of the results with the IT Associate Director, the endpoint devices were immediately patched.

- **Recommendation No. 6.3** – Work with the UTS Network Services Department to ensure that all folders and hard drives of the workstations are encrypted.

Management’s Reported Actions:

We currently have worked with the Division of IT in installing Data Loss Prevention (DLP) and Encryption on our workstations. These services will minimize the risk and exposure of sensitive data by encrypting the hard drive (all files contained on the workstation) to prevent unauthorized use by others. We will double check all machines to ensure that the DLP has been installed.

Reported Implementation Date:

November 8, 2013

Current Observation:

7 out of 11 workstations did not have McAfee encryption installed due to the hard drive not passing the integrity test or the installation of a competing product was identified during the automatic installation of the McAfee product suite. Upon review of the results with the IT Associate Director, 6 of the 7 devices were immediately encrypted and 1 is no longer applicable as the device was sent to surplus.

- **Recommendation No. 6.4** – Work with the UTS Media Sanitization Department to classify the sensitivity of the information systems that are sent to surplus along with the total number of devices and reconcile the total number of sanitized information systems.

Management's Reported Actions:

We have worked with the UTS Media Sanitization Department in order to reconcile the total number of sanitized information systems. Although protocol was followed, we will ensure that the process is documented and filed.

Reported Implementation Date:

April 15, 2013

Current Observation:

The Division of Information Technology had 51 items, whereas FIU Online had 69 devices sent to surplus during the audit period. The two departments track inventory by different IDs and are unable to reconcile the actual number of devices that were surplus.

- **Recommendation No. 7.1** – Work with UTS Network Security and System Engineering to review and appropriately limit Amazon Web Services Cloud egress network traffic.

Management's Reported Actions:

We reviewed the recommendation and along with the University Network Team concluded that all egress traffic would not be eliminated because of the possibility that it would negatively affect our operation.

Reported Implementation Date:

November 8, 2013

Current Observation:

Since the prior audit, the Division of IT has purchased a Security Information and Event Management (SIEM) device to read log files to detect malicious activity, which can be used as a mitigating control. In addition, the in-scope AWS database communicates with one other device and can be locked down through egress firewall rules. We asked the Division of IT Network Security Department to run a zero hit count on the devices' firewall rules to see which ones are no longer actively in use. The results showed that 85 of the 168 rules were not used over the last 12 months. Also,

the Division of IT can perform a zero-hit count on the AWS database to determine if there are rules that are no longer necessary. Lastly, the Statement of Controls No. 2 for the Blackboard information systems did not review firewall controls. FIU Online should request copy of the firewall reviews performed by Blackboard to ensure that rules are reviewed. Inactive firewall connections that are no longer needed provide unnecessary potential entry points for network attacks.

- **Recommendation No. 8.5** – Review the workstations with generic local administrator accounts and either remove or rename them to uniquely identifiable user accounts.

Management's Reported Actions:

We will immediately remove all local admin user accounts from all our workstations.

Reported Implementation Date:

April 15, 2013

Current Observation:

9 of 11 endpoint devices tested have generic local administrator user accounts. As discussed above, generic accounts, specifically with administrator privileges, reduces the information systems' ability to track individual user actions. Additionally, the user accounts could be used to bypass existing identity management controls. Upon review of the results with the IT Associate Director, all 9 generic local administrator user accounts were immediately removed.

- **Recommendation No. 9.1** – Perform a formal business impact analysis for all critical business operations to ensure the effectiveness of these strategies to recover critical services and processes.

Management's Reported Actions:

We reviewed critical business operations and have scheduled a disaster recovery test for May 7, 2014 to avoid interrupting class schedules.

Reported Implementation Date:

April 18, 2014

Current Observation:

According to supplied documentation by FIU Online, Salesforce performs a business impact analysis. In addition, Blackboard provides recovery times for their hosted customers. However, the Blackboard SOC-2 did not identify whether they performed a Business Impact Analysis and Salesforce was not included in the FIU Online Disaster Recovery Plan. Additionally, FIU Online did not perform a business impact analysis on two critical servers located in the MMC Data Center and AWS locations. Without performing a Business Impact Analysis, FIU Online is unable to quantify the financial impact or adequately reduce the operational risk of the critical information systems in the event of a disaster.

We also noted in the Salesforce SOC-2 Report that there were instances of backups failing and not performed. FIU Online should address the backup testing to ensure that there is no impact to the operations.

- **Recommendation No. 9.3** – Formalize test scripts and results.

Management’s Reported Actions:

All test scripts have been reviewed, updated and documentation has been organized and is being stored in a digital repository.

Reported Implementation Date:

April 18, 2014

Current Observation:

Documentation provided by FIU Online for the Salesforce and Blackboard information systems show business continuity testing were performed. However, Formalized test scripts and results have not been performed for two critical servers located in the MMC Data Center and AWS. Corrective actions taken and lessons learned should be included in test results and presented to senior management. The lack of testing reduces the effectiveness of the disaster recovery plan to ensure all critical information systems are adequately protected in the event of a disaster.

Recommendation

FIU Online should:	
6.1	Implement the cited prior audit recommendations.

Management Response/Action Plan:

Financial and Operational Controls recommendations not fully implemented are addressed by management within Section I.

Below are management’s responses to the prior audit Information Technology Controls recommendations identified as not fully implemented, along with the pertinent prior audit recommendation number.

- 6.1 FIU Online does work with the IT Security Office to ensure that all required University configurations and policies are pushed to our workstations by the Division of IT. All FIU Online workstations are part of the University's Active Directory and MacAfee Security Suite, which is managed by the Division of IT. The two identified devices have been scanned and no malicious code was found. MacAfee has real time prevention of malicious code and attacks, which minimizes workstation vulnerability. As an added layer of security, FIU Online will perform vulnerability scans on devices that are considered high-risk.

Implementation Date: Immediately

- 6.2 Three of the workstations scanned during this audit were testing machines, which are not used on a daily basis, however whenever they are used the operating system's service packs are automatically downloaded and installed.

Implementation Date: Immediately

- 6.3 FIU Online does work with the UTS Network Services Department to ensure that all required University configurations and policies are pushed to our workstations by the Division of IT. All FIU Online workstations are part of the University's Active Directory and McAfee Security Suite, which is managed by the Division of IT. Encryption is part of the McAfee suite; we are working with Division of IT to determine why these machines were not encrypted automatically. These computers have all been encrypted as of September 2017. Furthermore, we are now receiving weekly reports identifying any workstations that are not encrypted.

Implementation Date: Immediately

- 6.4 FIU Online does work with the UTS Media Sanitization Department to classify the sensitivity of the information systems that are sent to surplus along with the total number of devices. We have all signed and dated documentation showing that all surplus computers were sanitized. Reconciliation was completed; one batch of sanitization forms was inadvertently not included in the documentation provided to the auditor.

Implementation Date: Immediately

- 7.1 FIU Online has worked with UTS Network Security and System Engineering to review Amazon Web Services Cloud egress network traffic. A determination had been made that this recommendation was not feasible, as it would hinder business processes. Since then, however, the Division of Information Technology has added new layers of security that would improve overall security mechanisms. FIU Online will work with the Division of Information Technology to limit the egress rules for the in-scope database, connect log files to the SIEM, run a zero-hit count on AWS firewall rules and request a copy of the firewall reviews performed by Blackboard to improve the FIU Online security where feasible without hindering business processes.

Implementation Date: July 2018

- 8.5 FIU Online will verify that all workstation have no local admin user accounts. Additionally we have implemented an Active Directory Group policy to remove and prevent local user accounts from being created.

Implementation Date: Immediately

9.1 FIU Online does perform a formal business impact analysis. Salesforce will be added to the current Disaster Recovery Plan and the two recommended servers will be added to the formal business impact analysis.

Implementation Date: May 2018

9.3 FIU Online does have formalized test scripts and results. FIU Online will create formalized test scripts for the two servers identified and review results.

Implementation Date: May 2018