



**Audit of Performance Based Funding and
Emerging Preeminent Metrics Data Integrity
Report No. 22/23-06
February 10, 2023**



Date: February 10, 2023

To: Elizabeth Bejar, Interim Provost, Executive Vice President, and Chief Operating Officer
Hiselgis Perez, Associate Vice President of Office of Analysis and Information Management

From: Trevor L. Williams, Chief Audit Executive

A blue ink signature of Trevor L. Williams, written in a cursive style.

Subject: Audit of Performance Based Funding and Emerging Preeminent Metrics Data Integrity, Report No. 22/23-06

Beginning in fiscal year 2013-2014, the State University System of Florida Board of Governors (BOG) instituted a performance-based funding program predicated on 10 performance metrics used to evaluate Florida's public universities. For fiscal year 2022-2023, the Florida Legislature and Governor allocated \$560 million in performance-based awards, of which FIU received \$66.8 million for being ranked third. Additionally, in 2019, FIU received the designation of an emerging preeminent state research university by the authority of Florida Statute 1001.7065, and that designation continues to date.

Pursuant to BOG Regulation 5.001(8) and Florida Statute 1001.706, we have completed an audit of the University's performance-based funding and emerging preeminent metrics. The primary objectives of our audit were to determine whether the processes established by the University ensure the completeness, accuracy, and timeliness of data submissions to the BOG that support the Performance Based Funding and Emerging Preeminent Metrics and to provide an objective basis of support for the University President and the Board of Trustees Chair to sign the representations made in the *Data Integrity Certification* for Performance-based Funding and Emerging-preeminence status that will be submitted to the Board of Trustees and filed with the BOG by March 1, 2023.

Our audit confirmed that FIU continues to have good process controls for maintaining and reporting performance metrics data. Overall, the system continues to function in a reliable manner, in all material respects. However, although having no adverse impact on the calculation of the metrics tested, we identified gaps that if appropriately addressed by management, will enhance the process. We offered five recommendations to address the issues identified during the audit. Management has agreed to implement all recommendations offered. Additionally, we noted two other conditions, which were determined not to be sufficiently significant or material to the scope of the audit as they related to some ancillary University processes that could also benefit from process improvements thereto and have communicated them to management in a separate letter dated February 10, 2023, for their consideration and follow-up.

We want to take this opportunity to express our appreciation to you and your staff for the cooperation and courtesies extended to us during the audit.

Attachment

C: FIU Board of Trustees

Kenneth A. Jessell, University President

Aime Martinez, Interim Chief Financial Officer and Vice President for Finance and Administration

Javier I. Marques, Vice President for Operations and Safety and Chief of Staff, Office of the President

Robert Grillo, Vice President, Information Technology; Chief Information Officer

Kevin Coughlin, Vice President, Enrollment Management & Services; Vice Provost, FIU Virtual Campus

Brigette Cram, Interim Vice President for Innovative Education and Student Success

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EXECUTIVE SUMMARY

Introduction

Beginning in fiscal year 2013-2014, the State University System of Florida Board of Governors (BOG) instituted a performance based funding program predicated on 10 performance metrics used to evaluate Florida's public universities. For fiscal year 2022-2023, FIU ranked number three and received \$66.8 million of the \$560 million distributed by the Florida Legislature and Governor. Furthermore, in 2019, the University achieved sufficient preeminent metrics to receive the designation of an emerging preeminent state research university and that designation continues to date.

What We Did


As required by the BOG, we performed this audit to determine whether the processes established by the University ensure the completeness, accuracy, and timeliness of data submissions to the BOG that support the Performance Based Funding and Emerging Preeminent Metrics.

What We Concluded

In summary, we concluded that the University continues to have good process controls for maintaining and reporting performance metrics data. In our opinion, the system, in all material respects, continues to function in a reliable manner. Nevertheless, although having no adverse impact on the calculation of the metrics tested, we observed certain areas that could benefit from process improvements, as follows:

- We found one instance where an unallowable course was used towards a student's degree. All no-count course repeat attempts should be identified and not used as hours towards the student's degree.
- We noted certain student fee waiver categories were not reported to the BOG. Additionally, we noted instances where student fee waivers were not timely applied to student accounts and thus were not captured and reported to the BOG. All allowable student fee waivers must be captured and reported to the BOG within the SIF Fee Waivers Table.
- We found 6 of 40 employees with write access to eight critical fields identified in the Mapping of Elements who did not require such level of access. Functional units should periodically review access to PantherSoft fields that AIM has identified as critical to the calculation of the metric data.
- We reviewed the Mapping of Elements document for metrics 1, 2, and 3 and found that two of the eight fields selected were not being audited. Additionally, we found that 11 of 23 fields tested had audit logging turned on but the records were blank. It is important to ensure that audit logging is enabled and functioning properly to monitor for any potential unauthorized actions.

The reportable conditions found and the background giving rise to the foregoing recommendations are detailed in the Observations and Recommendations section beginning on page 12 of this report. We have also included the mitigation plans management has proposed in response to our observations and recommendations, along with their implementation dates and complexity ratings. Furthermore, we found other conditions, which were determined not to be sufficiently significant or material to the scope of the audit as they related to some ancillary University processes that could also benefit from process improvements thereto and have communicated them to management in a separate letter dated February 10, 2023, for their consideration and follow-up.



OBJECTIVES, SCOPE, AND METHODOLOGY

Pursuant to the State University System (SUS) of Florida Board of Governors Regulation 5.001(8) and Florida Statute 1001.706, we have completed an audit of the data integrity and processes utilized in the University's Performance Based Funding (PBF or "Funding Metrics") and Emerging Preeminent Metrics. Our audit entailed an examination of data files submitted to the BOG between September 1, 2021, and August 31, 2022. The primary objectives of our audit were to:

- (a) Determine whether the processes established by the University ensure the completeness, accuracy, and timeliness of data submissions to the BOG that support the Performance Based Funding and Emerging Preeminent Metrics; and
- (b) Provide an objective basis of support for FIU Board of Trustees Chair and the University President to sign the representations made in the *Data Integrity Certification*, which will be submitted to the Board of Trustees and filed with the BOG by March 1, 2023.

Our audit was conducted in conformance with the *International Standards for the Professional Practice of Internal Auditing* promulgated by The Institute of Internal Auditors and *IS Audit and Assurance Standards* issued by ISACA, and included an examination of the supporting records, systems, and processes and the performance of such other auditing procedures, as we considered necessary under the circumstances.

This is our ninth audit of the Performance Based Funding Metrics since it became effective in 2014. During our first-year audit, we performed data accuracy testing on all 10 metrics as requested by the BOG. In subsequent years' audits, since we have consistently deemed internal controls satisfactory, we have taken a risk-based approach and have limited our data accuracy testing to specific metrics and followed up on any prior year recommendations. Our choice of metrics to audit was based on distinct factors: audit risk, changes to the metric, and the time elapsed since the metric was last audited. Prior to this audit, we have audited each of the 10 metrics at least twice, with metrics 4 through 10 tested three or more times. Depicted in the following table are the metrics audited by year.

Audit Coverage of PBF Metrics			
Audit FY	Metrics Tested	Comment	
1.	2014-15	1-10	First year; test of all metrics required by BOG
2.	2015-16	6, 7, 8, & 10	
3.	2016-17	1, 2, 4, & 5	
4.	2017-18	3 & 9	First year of the revised Metric 3
5.	2018-19	4 & 5	First year of the revised Metric 4
6.	2019-20	7 & 10	
7.	2020-21	6, 8, & 9	
8.	2021-22	4, 5, 9, & 10	First year of the revised Metrics 9 and 10
9.	2022-23	1, 2, & 3	

While there were no prior year audit findings stemming from our data accuracy testing, for this year's audit, we determined to test Metrics 1, 2, and 3, which have only been audited twice.

The three PBF metrics tested were as follows:

- Metric 1 – Percent of Bachelor's Graduates Enrolled or Employed (Earning \$30,000+) One Year After Graduation
- Metric 2 – Median Wages of Bachelor's Graduates Employed Full-time One Year After Graduation
- Metric 3 – Cost to the Student Net Tuition and Fees for Resident Undergraduates per 120 Credit Hours

We identified the main data files and tables related to the calculations of the three PBF metrics under review, as follows:

Related Data Files and Tables in Calculations of Metrics	
Data Files	Tables
Degrees Awarded (SIFD)	<ul style="list-style-type: none"> • Degrees Awarded • Person Demographic
Student Instruction (SIF)	<ul style="list-style-type: none"> • Person Demographic • Fee Waivers • Courses Taken • Enrollment
Hours to Degree (HTD)	<ul style="list-style-type: none"> • Courses to Degree
Student Financial Aid (SFA)	<ul style="list-style-type: none"> • Financial Aid Awards

Management provided us with the in-scope data elements for each metric subject to our audit testing (see Appendix I – In-scope BOG Data Elements on page 26), which we confirmed with staff at the BOG's Office of Data & Analytics (ODA).

The objective of our testing was to validate that the data submitted was unabridged and identical to the data contained in PantherSoft, the University's system of record. However, in certain circumstances as described within the individual metrics accuracy testing, we may have further validated the integrity of the data contained in PantherSoft. During the audit, we:

- Updated our understanding of the data flow process for all the relevant data files from the transactional level to their submission to the BOG;
- Performed an analysis of the *Annual AIM* (Office of Analysis and Information Management) *Review*. This review includes an assessment of audit logs, system access controls, and user privileges within PantherSoft and the State University Database System (SUDS);
- Interviewed key personnel, including AIM employees, functional unit leads, and those responsible for developing and maintaining the information systems;
- Reviewed BOG data definitions and methodology and meeting notes from the relevant groups within the BOG and FIU to identify changes to the BOG Funding Metrics;

- Observed current practices and processing techniques;
- Tested the accuracy of the data files for three of the 10 performance based funding metrics and three of the 10 emerging preeminent metrics achieved and submitted to the BOG as of August 31, 2022.

Sample sizes and elements selected for testing were determined on a judgmental basis applying a non-statistical sampling methodology.

We conducted our audit planning and fieldwork from August 2022 to January 2023. In fiscal year 2021-2022, we issued the report *Audit of Performance Based Funding and Emerging Preeminence Metrics Data Integrity*, (Report No. 21/22-03), dated February 10, 2022. That audit report offered four recommendations requiring follow-up which management implemented, and we validated during our audit.

BACKGROUND

The Florida Board of Governors has broad governance responsibilities affecting administrative and budgetary matters for Florida's 12 public universities. Beginning in fiscal year 2013-2014, the BOG instituted a performance-based funding program, which is predicated on 10 performance metrics used to evaluate the universities on a range of indicators, including graduation and retention rates, job placement, and access rate, among others. Two of the 10 performance metrics are "choice metrics"—one selected by the BOG and one selected by each university's Board of Trustees. These metrics were chosen after reviewing over 40 metrics identified in the Universities' Work Plans but are subject to change yearly. The 10 metrics pertaining to Florida International University are depicted in the following table.

FIU's Performance Based Funding Metrics			
1.	Percent of Bachelor's Graduates Enrolled or Employed (Earning \$30,000+) One Year After Graduation	6.	Bachelor's Degrees Awarded in Areas of Strategic Emphasis
2.	Median Wages of Bachelor's Graduates Employed Full-time One Year After Graduation	7.	University Access Rate (Percent of Undergraduates with a Pell Grant)
3.	Cost to the Student Net Tuition and Fees for Resident Undergraduates per 120 Credit Hours	8.	Graduate Degrees Awarded in Areas of Strategic Emphasis
4.	Four-Year FTIC (Full-time, First-Time-In-College) Graduation Rate	9a.	BOG Choice – Two-Year Graduation Rate for Florida College System Associate in Arts Transfer Students
		9b.	BOG Choice – Six-Year Graduation Rate for Students who are Awarded a Pell Grant in their First Year
5.	Academic Progress Rate (2 nd Year Retention with GPA above 2.0)	10.	Board of Trustees' Choice – Number of Post-Doctoral Appointees

In 2016, the Florida Legislature passed, and the Governor signed into law the Board of Governors' Performance-Based Funding Model, now codified into the Florida Statutes under Section 1001.66, *Florida College System Performance-Based Incentive*.

The BOG's model has four guiding principles:

1. Use metrics that align with the SUS Strategic Plan goals
2. Reward Excellence or Improvement
3. Have a few clear, simple metrics
4. Acknowledge the unique mission of the different institutions

The Performance Funding Program also has four key components:

1. Institutions are evaluated and receive a numeric score for either Excellence or Improvement relating to each metric.
2. Data is based on one-year data.
3. The benchmarks for Excellence were based on the Board of Governors' 2025 System Strategic Plan goals and analysis of relevant data trends, whereas the benchmarks for Improvement were decided after reviewing data trends for each metric.
4. The Florida Legislature and Governor determine the amount of new state funding and the proportional amount of institutional funding that would come from each university's recurring state-base appropriation.

The following table summarizes the performance funds allocated for the fiscal year 2022-2023 using the results of the performance metrics from fiscal year 2021-2022, wherein FIU ranked third with 91 points.

Florida Board of Governors Performance Funding Allocation, 2022-2023 ¹				
	Normalized Score	Institutional Investment Allocation	Maximum State Investment Allocation *	Total Performance Funding Allocation
FAMU	72	\$14,012,282	\$12,587,304	\$26,599,586
FAU	80	22,548,831	20,255,729	42,804,560
FGCU	71	12,720,719	11,427,087	24,147,806
FIU	91	35,168,400	31,591,953	66,760,353
FL Poly	66	4,748,742	4,265,819	9,014,561
FSU	90	46,481,148	41,754,252	88,235,400
NCF	66	4,040,914	3,629,973	7,670,887
UCF	88	36,004,365	32,342,904	68,347,269
UF	93	57,004,493	51,207,425	108,211,918
UNF	78	14,269,586	12,818,442	27,088,028
USF	92	37,993,870	34,130,087	72,123,957
UWF	81	10,006,650	8,989,025	18,995,675
Totals		\$295,000,000	\$265,000,000	\$560,000,000

*Top 3 institutions (including ties) receive 100% of their allocation of state investment. Universities with a score the same or higher as the previous year receive 100% of their allocation of the state investment. If a university's score decreases for 2 consecutive years, the university may receive up to 100% of their allocation of the state investment after presenting/completing a student success plan. **Source: BOG**

¹ The amount of state investment is appropriated by the Legislature and Governor. A prorated amount is deducted from each university's base recurring state appropriation (Institutional Investment) and is reallocated to each institution based on the results of the performance-based funding metrics (State Investment).

Pursuant to section 1001.706(5)(e), Florida Statutes:

Each university shall conduct an annual audit to verify that the data submitted pursuant to ss. 1001.7065 and 1001.92 complies with the data definitions established by the board and submit the audits to the Board of Governors Office of Inspector General as part of the annual certification process required by the Board of Governors.

In addition to the data integrity audit for the Performance-Based Funding Model, universities designated as preeminent or emerging preeminent must conduct a similar audit for the data and metrics used for preeminence status consideration. The BOG permits this audit either to be included with or separate from the Performance Based Funding Data Integrity Audit.

In 2019, Florida International University achieved sufficient preeminent metrics to qualify for designation as an emerging preeminent state research university by the authority of Florida Statute 1001.7065, and that designation continues to date. Emerging Preeminent status is achieved upon meeting a minimum of 6 of the 12 metrics, while Preeminent status requires meeting 11 of the 12 metrics. The following table lists the 12 preeminent metrics and highlights in **bold type** the 10 metrics the University met, specifically metrics 1, 2, 3, 5, 6, 7, 8, 9, 10, and 11.

FIU's Emerging Preeminent Metrics			
1.	Average GPA and SAT Score for Incoming Freshman in Fall Term	7.	Total Amount R&D Expenditures in Non-Health Sciences
2.	Public University National Ranking	8.	National Ranking in Research Expenditures
3.	Freshman Retention Rate (Full-Time, First-Time-In-College)	9.	Patents Awarded (over a 3-year period)
4.	Four-Year Graduation Rate (Full-Time, First-Time-In-College)	10.	Doctoral Degrees Awarded Annually
5.	National Academy Memberships	11.	Number of Post-Doctoral Appointees
6.	Total Annual Research Expenditures (Science & Engineering only)	12.	Endowment Size

Organization

AIM consists of the Office of Institutional Research (IR) and the Office of Retention & Graduation Success. One of the goals of AIM is to provide the University community with convenient and timely access to information needed for planning, data driven decision-making, and to respond to data requests from external parties. IR is currently responsible for:

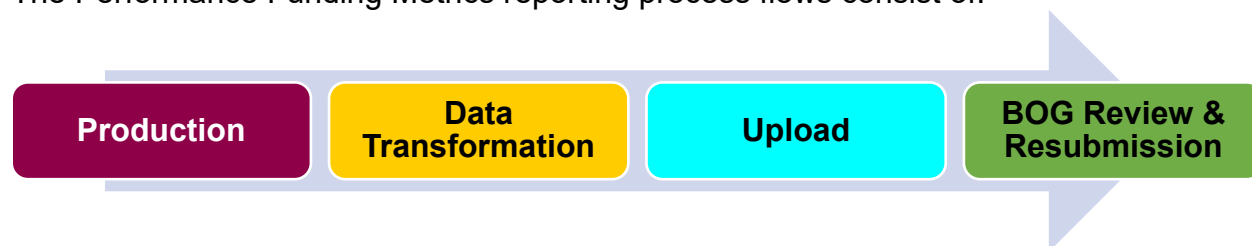
- Faculty Perception of Administrators
- Assisting with the online system used to credential faculty
- Academic Program Inventory
- Assignment of Classification of Instructional Program codes to courses and certificate programs

IR has been the official source of FIU's statistics, providing statistical information to support decision-making processes within all academic and administrative units at FIU, and preparing reports and files for submission to the BOG and other agencies. IR is also responsible for data administration, enrollment planning, and strategic planning.

The Office of Retention & Graduation Success identifies barriers to student success and works to eliminate those barriers. This Office helps to carry out the Graduation Success Initiative, primarily by providing "Major Maps" and alerts for students and academic advisors, and information and analyses to departments and decision-makers.

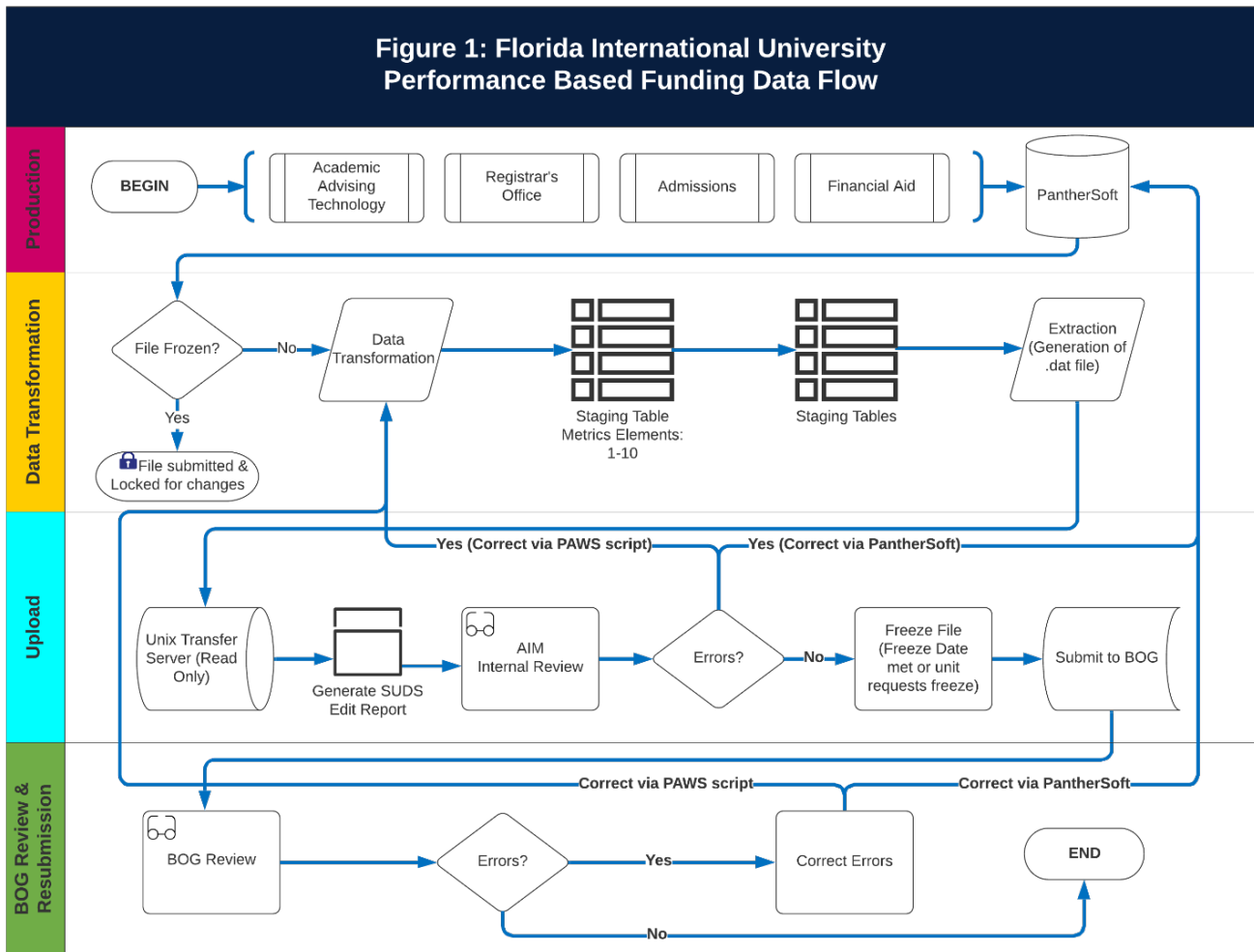
The Associate Vice President of AIM, who is also the University's Data Administrator, reports directly to the Interim Provost and is responsible for gathering data from all applicable units, preparing the data to meet BOG data definitions and requirements, and submitting the data to the BOG.

The Performance Funding Metrics reporting process flows consist of:



AIM and the Division of Technology Enterprise/Applications Solutions ("DoIT PantherSoft") work collaboratively to translate the production data, which is sent to staging tables, where dedicated developers perform data element calculations that are based on BOG guidelines and definitions. Once the calculations are completed, the data is formatted into text files and moved to an Upload folder. Users then log into SUDS and depending on their roles, they either upload, validate, or submit the data to the BOG. The DoIT PantherSoft team assists with the entire consolidation and upload process.

The figure below illustrates how data is captured, analyzed, stored, and distributed to the BOG through SUDS and the information system controls in place.



OVERALL ASSESSMENT OF INTERNAL CONTROLS

Our overall assessment of internal controls is presented in the table below.

INTERNAL CONTROLS ASSESSMENT			
CRITERIA	SATISFACTORY	OPPORTUNITIES TO IMPROVE	INADEQUATE
Process Controls	X		
Policy & Procedures Compliance	X		
Effect	X		
Information Risk	X		
External Risk	X		
INTERNAL CONTROLS LEGEND			
CRITERIA	SATISFACTORY	OPPORTUNITIES TO IMPROVE	INADEQUATE
Process Controls: Activities established mainly through policies and procedures to ensure that risks are mitigated, and objectives are achieved.	Effective	Opportunities exist to improve effectiveness	Do not exist or are not reliable
Policy & Procedures Compliance: The degree of compliance with process controls – policies and procedures.	Non-compliance issues are minor	Non-compliance issues may be systematic	Non-compliance issues are pervasive, significant, or have severe consequences
Effect: The potential negative impact to the operations- financial, reputational, social, etc.	Not likely to impact operations or program outcomes	Impact on outcomes contained	Negative impact on outcomes
Information Risk: The risk that information upon which a business decision is made is inaccurate.	Information systems are reliable	Data systems are mostly accurate but need to be improved	Systems produce incomplete or inaccurate data which may cause inappropriate financial and operational decisions
External Risk: Risks arising from events outside of the organization's control; e.g., political, legal, social, cybersecurity, economic, environment, etc.	None or low	Potential for damage	Severe risk of damage

OBSERVATIONS AND RECOMMENDATIONS

Areas Within the Scope of the Audit Tested Without Exception:

Data Accuracy Testing - Performance Based Funding Metrics 1 and 2

The BOG generated the data for Metrics 1 and 2 from the SIF and SIFD files the University submitted and other external data related to employment. We excluded a review of the external data from the scope of this audit.

Metric 1, Percent of Bachelor's Graduates Enrolled or Employed (Earning \$30,000+) One Year After Graduation, is based on the percentage of a graduating class of bachelor's degree recipients who are enrolled or employed (earning at least \$30,000) somewhere in the United States. Students who do not have valid social security numbers and are not found enrolled are excluded. This data now includes: non-Florida data from all states and districts, including the District of Columbia and Puerto Rico; and military enlistment as reported by the institutions.

Metric 2, Median Wages of Bachelor's Graduates Employed Full-time - One Year After Graduation, is based on annualized Unemployment Insurance (UI) wage data from the fourth fiscal quarter after graduation for bachelor's recipients. This data does not include individuals who are self-employed, employed by the military, those without a valid social security number, or making less than minimum wage. This data now includes non-Florida data from all states and districts, including the District of Columbia and Puerto Rico.

To verify the data in the SIF file submitted to the BOG was accurate, we judgmentally selected a sample of 30 students from the Spring 2022 Person Demographic Table and verified that the data submitted to the BOG agrees with the data found in the students' records in PantherSoft. We verified the five elements relevant to Metrics 1 and 2 and found no exceptions.

Likewise, to verify the data submitted in the SIFD file, we judgmentally selected a sample of 30 students for testing from the Fall 2021 Degrees Awarded Table and a sample of two students from the Person Demographic Table. We verified the information related to the nine elements that are relevant to Metrics 1 and 2 without exception.

Conclusion

Our testing of the SIF and SIFD files found no differences between the information submitted to the BOG and the data contained in PantherSoft as it related to the elements that are relevant to Metrics 1 and 2.

Data Accuracy Testing - Emerging Preeminent Metrics

In 2022, the University achieved 10 of the 12 Preeminence metrics, once again earning its Emerging Preeminent designation. We selected 3 of the 10 metrics met for testing as follows:

- Metric 2 – National University Rankings
- Metric 7 – Total Amount Research and Development (R&D) Expenditures in Non-Health Sciences
- Metric 9 – Patents Awarded

In October 2020, the BOG issued the *Preeminent Metrics Methodology Document*, which we used in our testing.

We tested the accuracy of the data used for the three metrics by obtaining the respective University files and reviewing them against the data provided to the respective organizations associated with each metric, that is, the National Science Foundation (NSF) and the United States Patent and Trademark Office (USPTO). In addition, where applicable, we agreed the information to the data in PantherSoft.

Metric 2 – Public University National Ranking

A top-50 ranking on at least two well-known and highly respected national public university rankings, including, but not limited to, the U.S. News and World Report rankings, reflecting national preeminence, using most recent rankings.

Based on the BOG approved list of publications, we found that the University was listed in the top-50 national public university ranking in two of the publications.

Metric 7 – Total Annual R&D Expenditures in Non-Health Sciences

Total annual Science & Engineering research expenditures in diversified non-medical sciences of \$150 million or more.

Once a year, the ODA staff analyzes each institution's response to the National Science Foundation's annual Higher Education Research and Development survey that is submitted to the BOG via the Data Request System. ODA staff add the total federal and non-federal medical sciences and then subtract that sum from the Science and Engineering (S&E) total that is calculated for Preeminent Metric 6. The results of ODA's research are reviewed and approved by Institutional Data Administrators before being included in the Accountability Plans.

To test the accuracy of the data related to research expenditures for S&E in non-medical sciences, we reconciled the research expenditures data received from ODA with the data reported by the NSF, without exception. The NSF website reported research expenditures totaling \$200 million. We further grouped the data by cost center and tested 20 cost centers, totaling \$10,893,876, to ensure the expenditures were: (1) related to S&E

research, (2) a non-medical expense, and (3) in agreement with the amount reported in PantherSoft Financials. Our testing found no exceptions.

Metric 9 - Patents Awarded (Over a 3-year Period)

One hundred or more total patents awarded by the United States Patent and Trademark Office for the most recent 3-year period.

Once a year, the BOG ODA staff searches the online database for the USPTO for all utility patents awarded during the most recent 3-year period. We obtained the listing of patents from management for the years 2019 through 2021, which totaled 186, and reconciled it with the patents resulting from a query provided by the BOG, which resulted in 184 patents. The difference was considered immaterial, and the total patents awarded in either case exceeded the required minimum of 100 patents awarded during the most recent 3-year period.

Conclusion

Our testing of the Emerging Preeminent metrics found the data reported to be accurate and consistent with the definitions and methodologies outlined in the BOG's *Preeminent Metrics Methodology Document*.

Data File Submissions and Resubmissions

Data File Submissions

To ensure the timely submission of data, AIM used the due date schedule provided by the BOG in SUDS to keep track of the files due for submission and their due dates. AIM also maintains a schedule for each file to be submitted, which includes meeting dates with the functional unit leads, file freeze date, file due date, and actions (deliverables) for each date on the schedule. We used data received directly from the BOG ODA in addition to data provided by AIM to review the timeliness of actual submittals.

The following table reflects the original due dates and original submission dates of all relevant Performance Based Funding Metrics files during the audit period. All files were submitted by the BOG due date:

File		Period	Original Due Date	Original Submission Date
ADM	Admissions	Summer 2021	09/10/21	09/10/21
SIF	Student Instruction	Summer 2021	09/28/21	09/27/21
SIFD	Degrees Awarded	Summer 2021	10/01/21	10/01/21
SFA	Student Financial Aid	Annual 2021	10/08/21	10/08/21
ADM	Admissions	Fall 2021	10/15/21	10/15/21
HTD	Hours to Degree*	Annual 2021	11/12/21	11/12/21
SIF	Student Instruction	Fall 2021	01/14/22	01/14/22
SIFD	Degrees Awarded	Fall 2021	01/21/22	01/21/22
RET	Retention	Annual 2021	02/01/22	02/01/22
ADM	Admissions*	Spring 2022	03/11/22	03/11/22
SIF	Student Instruction	Spring 2022	06/10/22	06/10/22
SIFD	Degrees Awarded	Spring 2022	06/24/22	06/22/22

* The indicated file was subsequently resubmitted and is reviewed below.

Data File Resubmissions

To determine the frequency of the resubmissions, we reviewed a list provided by the BOG staff for all files submitted pertaining to the 10 PBF metrics. The University submitted 12 files with due dates that were within our audit period of September 1, 2021, through August 31, 2022, of which two files required resubmission (both files were resubmitted twice). In the instances observed, the BOG staff requested the resubmission of the HTD and ADM files by reopening the SUDS system for resubmission.

The following tables describe the two files resubmitted and AIM's reason for the resubmissions.

Resubmission File - Hours to Degree (HTD)				
Period	Original Due Date	Original Submission Date	Resubmission Date #1	Resubmission Date #2
Annual 2021	11/12/2021	11/12/2021	12/9/2021	01/5/2022
<p>The HTD file required two resubmissions. In both instances, explanations, which had been accepted in previous years via e-mail, were no longer acceptable and resubmission was required.</p> <p>AIM Reason for Resubmission #1: The first resubmission addressed the catalog hours. There are a number of degree programs approved by the BOG whose catalog hours (hours required for the degree) are more than 120. However, in recent years, the BOG along with FIU have worked on reducing the number of such lengthy programs. As a result, we have students pursuing the same degree/major/6-digit CIP but their requirements differ. The BOG uses 6-digit CIP to identify the degree program. Upon working with the HTD file, the catalog hours are set to the allowable maximum level. Once the HTD file is run, there are students who generate an error on DiagCode 0140 - Hours Used to Degree is less than 100% of the Catalog Hours to Degree. The error captures students who are deemed to have insufficient hours towards their degree. Each case is then reviewed by the Panther Degree Audit (PDA) office staff. Further review indicated that the students are in a program which only requires 120 credits. In previous submissions, we would provide the explanation. However, in the last cycle, the BOG indicated that instead, we should simply report that such student(s) catalog hours are 120. Our business process remains the same in that the PDA staff reviews the cases and those whose programs are 120 hours are then updated via a script.</p> <p>AIM Reason for Resubmission #2: The second resubmission addresses credits that "appear" to have been completed after the degree was formally awarded. There is an edit DiagCode 0517 - The Term Identifier of the term when the course was taken cannot be greater than the Term Degree Granted – which captures courses/test credits completed after the degree is awarded. In many instances, students were completing test credits after a term was officially over, but the degree had not been officially conferred. Then once the degree was formally awarded, the degree date was less than the test date; thus, it made it seem as if a student was completing degree requirements after graduation. If a test was taken after completion of our FIU term, then our program logic was automatically assigning the subsequent semester as the term header (i.e., Term taken/completed). We had multiple discussions and sought guidance from the BOG on this issue. Based on the information received during our Zoom calls with the BOG, our program logic was updated so that as long as the test/credit is completed before the first day of classes of the subsequent term, then the term header is listed for the previous term. Also, the Registrar's Office has been more forceful and is not allowing departmental exceptions that do not meet the established dates.</p>				

Resubmission File - Admissions (ADM)				
Period	Original Due Date	Original Submission Date	Resubmission Date #1	Resubmission Date #2
Spring 2022	03/11/2022	03/11/2022	03/16/2022	03/24/2022
<p>AIM Reason for Resubmissions: The BOG brought to our attention a problem in the SSNs being reported in our submission. This initial discovery led to identifying three issues: 1) Invalid SSNs, 2) Different students sharing the same SSN, and 3) Same students with two University IDs ("PID"s). All three issues continue to be addressed with each submission. Effective in the new reporting cycle, the BOG has also included in their software SSNs deemed questionable and would generate an error in the submission. Also, every submission has a report (DUPLICATE_UNIV_ID_RPT - Flags duplicate UNIV_ID records.) which attempts to capture students with the same PID. Our technical team also generated a query which attempts to capture any cases that may fall under any of the three scenarios (PS Reporting: FIU_BOG_ID_DUPS_1). Cases are shared with our Admissions contact to figure out and resolve the issue. They are also working with the development team and seeking other measures to minimize this issue. Unfortunately, students forget their PIDs during the application process and the way the PS system is currently setup, it will give them a new PID. Also, Dual Enroll students are not required to provide an SSN so when they apply as degree seeking students and provide the SSN the system may assign them a new PID. This is an on-going project.</p>				

The Data Administrator has acknowledged that although their goal is to prevent any resubmissions, they are needed in cases where inconsistencies in data are detected by either University or BOG staff after the file has been submitted. According to the Data Administrator, a common reason for not detecting an error before submission is that some inconsistencies only arise when the data is cross validated among multiple files, which can only be accomplished by the BOG.

Conclusion

Our review disclosed that the process used by the Data Administrator provides reasonable assurance that complete, accurate, and timely submissions occurred. Notwithstanding the slight increase in the number of resubmittals, the reasons for the resubmissions continue to be addressed by the Data Administrator. As a result, programming changes have been implemented, while others are addressed on an ongoing basis. Therefore, we noted no reportable material weaknesses or significant control deficiencies related to data file submissions or resubmissions.

Review of University Initiatives

We obtained the following list of the University initiatives that are meant to bring FIU's operations and practices in line with the SUS Strategic Plan goals to determine if any initiative was purposely made to inflate performance goals.

- Implemented Educational and General revenue reallocation model.
- Implemented faculty reallocation model for academic units.
- Provided greater access to on-demand analytics relevant to the metrics.
- Leveraged student level graduation benchmarking to inform outreach interventions.
- Integration of career and academic advising.
- Strategic enrollment planning via Noel Levitz.
- Created an Office of Scholarships and Academic Program Partners to support all colleges in their efforts to apply foundation scholarship funds to student success and enrollment goals.
- Expanded merit scholarship opportunities and initiated two new scholarships "Jumpstart FIU" and "Panther Achievement Award".
- Implemented centralized coordination and local deployment for student recruitment efforts.
- Expanded centralized retention, graduation, and student success outreach.
- Utilized graduation and retention predictive models to inform student success outreach and strategy.
- Implemented efforts to reduce course scheduling-related barriers to student progression to graduation.
- Scheduled regular meetings with college leadership to discuss their student success goals, areas of opportunity, and strategies for improvement.

Conclusion

Our review disclosed that none of the initiatives provided appear to have been made for the purposes of artificially inflating performance goals.

Areas Within the Scope of the Audit Tested With Exception:

1. Data Accuracy Testing - Performance Based Funding Metric 3 - Cost to the Student Net Tuition and Fees for Resident Undergraduates per 120 Credit Hours

The data for Metric 3 is generated by the BOG from the HTD, SIF, and SFA files submitted by the University.

Metric 3, Cost to the Student Net Tuition and Fees for Resident Undergraduates per 120 Credit Hours, this metric compares the average sticker price and the average gift aid amount. The sticker price includes: (1) tuition and fees for resident undergraduates; (2) books and supplies (we use a proxy as calculated by the College Board); and (3) the average number of credit hours attempted by students who were admitted as an FTIC student who graduated with a bachelor's degree from a program that requires only 120 credit hours. The gift aid amount includes: (1) financial aid (grants, scholarships, waivers and third-party payments) provided to resident undergraduate students during the most recent academic year; (2) the total number of credit hours for those resident undergraduates. The average gift aid award per credit hour was multiplied by 120 and compared to the sticker price.

We obtained the annual 2020-2021 HTD Courses to Degree File and judgmentally selected a sample of 20 students. We tested the accuracy of the six data elements used for Metric 3 by comparing the data in the HTD file to the student's unofficial transcript. We noted one (5%) instance where a native no-count course repeat attempt was incorrectly marked as "D" (hours used towards the degree) resulting in an unallowable course being used towards the student's degree. Management noted this error was the result of an uncommon timing issue that is not captured by an automated Repeat Checking Process.

Our testing also uncovered four (20%) instances related to the recording of "lump-sum" credits to student records maintained in PantherSoft and their course system code ("O" – other SUS institution) and course grouping code ("A" – academic course) that are inconsequential to the metric calculation. Nevertheless, we have communicated these matters to management in a separate letter dated February 10, 2023, for their consideration and follow-up.

In addition, we tested the accuracy of the nine elements used in Metric 3's methodology from the SIF file's Fee Waivers, Courses Taken, and Enrollment Tables. We obtained the Fall 2021 SIF Fee Waivers Table and judgmentally selected a sample of 25 undergraduate resident students who received fee waivers totaling \$40,757 during the selected term. We agreed the waivers reported for each selected student to PantherSoft Campus Solutions and noted the following exceptions:

- Two (8%) of the selected students had waivers totaling \$5,756 that were coded to the incorrect waiver exemption type, but otherwise the waivers were reported to the BOG.

- 14 (56%) of the selected students received fee waivers for lab and course, athletic, distance learning, health, parking, and/or photo ID fee waivers totaling \$4,289 that were not reported to the BOG.
- Three (12%) of the selected students had waivers totaling \$355 that were not reported to the BOG due to the waivers being applied to student accounts after the file was submitted to the BOG.

Notwithstanding the fact that the observations above would have positively impacted FIU's metric calculation on a metric the University is currently achieving the maximum score of 10, all fees waived in accordance with Florida BOG Regulation 7.008, *Waivers and Exemptions of Tuition and Fees*, should be reported to the BOG on the SIF Fee Waivers Table.

Using the same selection of 25 undergraduate resident students, we agreed the data in the Fall 2021 SIF Enrollment and Courses Taken Tables for the five relevant elements to the information in PantherSoft and found no exceptions.

Lastly, Metric 3 utilizes the SFA file in the metric's methodology. To verify the data submitted in the SFA file is accurate, we selected a sample of 25 students from the 2020-2021 Financial Aid Awards Table and determined if the data provided to the BOG for the three relevant elements was the same as the data contained in PantherSoft. We found one (4%) instance where two stipends totaling \$3,555 were awarded to a student and were not included in the SFA file. The stipends were awarded between January 2022 and June 2022, after the Financial Aid Awards Table was submitted to the BOG in October 2021. Management noted the timing difference was due to the stipends being awarded based on the student's last active term within the period that students were eligible for funds as permitted by the American Rescue Plan Act of 2021, also called the COVID-19 Stimulus Package signed into law on March 11, 2021. In the selected student's case, the student's last active term was Spring 2021. As a result, the two stipends were not reported to the BOG in the original applicable submission and the files were not resubmitted. Since we found that the stipend application deadline was subsequent to the due date of the file submission, the University would not have been able to include this data at the time the file was submitted. As such, we determined this was not an exception that would have inflated the metric score for the University, as the inclusion of the stipends above would have only benefited FIU's metric calculation, which as noted earlier, the University is currently achieving the maximum score of 10.

Conclusion

Our testing of the HTD Courses to Degree Table noted an unallowable course being used towards a student's degree and our testing of the SIF Fee Waivers Table found student fee waivers that were either not properly identified or not captured and thus, not reported. Based on such, we determined that the controls related to Metric 3's data accuracy could be enhanced.

Recommendations

The Office of the Provost in coordination with Analysis and Information Management should:

- | | |
|-----|--|
| 1.1 | Ensure all no-count course repeat attempts are properly identified and are not coded as hours used towards the degree. |
|-----|--|

The Office of Analysis and Information Management should:

- | | |
|-----|--|
| 1.2 | Ensure all fees waived are captured and properly reported to the BOG on the SIF Fee Waivers Table. |
|-----|--|

Management Response/Action Plan

1.1 AIM and the PantherSoft Team have agreed to perform the following steps:

1. Initiate/kick-off the HTD review process in Spring to include prior Summer and Fall terms.
2. Run Batch Audit Type HTD for each graduation term to be included in HTD submission in PSAPRD. Spring degrees will be run after degrees file is submitted in mid-Summer.
3. Generate internal Moxie report for each graduation term that will contain courses that appear to be "repeats" but do not have the "repeat" indicator in PS. The report will contain courses in the student's history regardless of Enrollment Term Career level; in other words, across careers.
4. Review report and address/correct the issue.
5. Re-generate report as needed and prior to official HTD submission in November.

Implementation date: October 16, 2023

Complexity rating: 3 - Complex

1.2 AIM and the PantherSoft Team have agreed to perform the following steps:

1. Request list of current active waivers reported and not reported to the BOG.
2. Generate reports of waivers as requested by AIM.
3. Identify and initiate contact with functional units/members who must be involved in waiver review process to address recommendation.
4. Discuss recommendation, reach out to other SUS data administrators and BOG, seek BOG guidance, and determine appropriate implementation. Ultimate implementation may cause a system change and multiple item types would need to be created.
5. After implementation, generate a report of waivers not reported to the BOG within PS tools reported for each term.
6. Resolve, as needed, in the event any waivers come up in the report.

Implementation date: September 1, 2023

Complexity rating: 3 – Complex

2. Data Systems General Controls

PantherSoft Access Controls

Granting user access to PantherSoft based on the principle of least privilege reduces the risk of unauthorized input or modification of data used for metric calculations. We collaborated with the PantherSoft Security Team and the functional units to evaluate the permissions of personnel with access to critical PantherSoft fields used to compute the metric values in scope. To ensure that the principle of least privilege was followed for the users with write (edit) access to the fields, we randomly selected 8 of 26 critical fields identified in the *PantherSoft to BOG Mapping of Elements*. We then selected a group of 40 employees at random from the functional areas below to determine if their access to the fields was appropriate:

- Admissions
- Financial Aid
- Admission Systems and Data Support
- Registrars
- OneStop
- International Admissions
- VP Enrollment Services Administration
- Transfer and Transition Services
- Office of Analysis and Information Management
- FIU Online
- College of Law

Our review of the user permissions determined that most of the users with write access to fields we tested required the level of access observed. However, we found that 6 of the 40 users (15%) required an adjustment of permissions. Upon examination, the user permissions were subsequently revoked.

AIM continues to perform an annual review of user write access to critical PantherSoft fields. As part of a prior audit recommendation, AIM updated their review process during the audit period to now begin their analysis by generating a list of users with write access to the PantherSoft fields rather than relying on a pre-defined list of users. AIM then evaluates each user on the list for red flags arising because of the user either being a temporary employee or belonging to a unit that may not be affiliated with the metric data process. The functional units are then contacted to verify that the access is needed as part of the employee's duties.

We believe that the AIM review is an effective control that can assist in mitigating the risk of unauthorized users having write access to the PantherSoft fields. However, control gaps exist in the review process at the functional unit level that may result in permanent/full-time staff being unaccounted for, such as the six users identified above. To strengthen the review process, we believe that the functional units should have a larger role in ensuring that their respective employees have the appropriate level of access. The functional units are better equipped to know their personnel and can perform more frequent reviews of access over time.

PantherSoft Audit Logs

Audit log capabilities in the PantherSoft production environment, as appropriate, increases the effectiveness of detection controls to help the data administrator mitigate the risks of least privilege access, lack of segregation of duties, and unauthorized activities.

The PantherSoft Security Team has developed queries that allow functional unit leads and AIM to identify actions that have been taken in relevant fields. AIM uses these queries to review audit logs when conducting their annual review. Users with the appropriate privileges can also define custom queries to access the data. The queries access audit log data that is stored in separate immutable tables in PantherSoft. Any actions taken on a field that has the audit flag enabled will be captured in the tables.

We reviewed the *PantherSoft to BOG Mapping of Elements* document to identify critical fields used for metrics 1, 2, and 3, and selected eight unique PantherSoft fields to determine if audit log data was being captured. Of the eight fields, two were not being audited but could potentially be audited.

We also examined 23 fields that had audit logs established as part of the prior year's audit recommendation. We found that 11 of the fields had audit logging enabled but the records were blank. This error likely occurred due to either an Oracle software update resetting the audit flag for the fields or a secondary process responsible for writing data to the logs failing to execute. We believe that the functional units could assist in detecting any issues with logs as they would be better equipped to perform more frequent reviews of actions to the data directly handled by their area and have the requisite job knowledge to understand any modifications that appear within the logs. It is important to ensure that audit logging is enabled and functioning properly to monitor for any potential unauthorized actions.

Recommendations

The Office of the Provost in coordination with Analysis and Information Management should:	
2.1	Ensure that access to PantherSoft fields that AIM has identified as critical to the calculation of the metric data is reviewed periodically by the functional units that manage the related data.
2.2	Work with the functional units to develop a process to periodically review audit logs for activity that has been established, through issue profile modeling, as peculiar and/or anomalous for the impacted field.

PantherSoft Security should:	
2.3	Develop a process to verify that audit flags are enabled upon Oracle updates.

Management Response/Action Plan

2.1 The Office of the Provost and AIM have agreed to have the following steps performed:

1. PantherSoft Security, AIM, and functional units will collaborate on the development of a metric data field inventory by May 30, 2023.
2. PantherSoft Security will provide Division of Enrollment Management Services (EMS) directors with the results of a query that identifies all staff that have update (write) access to any field in the metric data inventory by May 30, 2023. PantherSoft Security will run these queries in October, February, and June of each year.
3. EMS Directors will review position descriptions and actual roles for all team members who have update (write) access three times a year (ostensibly in October, February, and June). Via a systemized documentation process, EMS Directors will review team members' access and record decision concerning access levels. EMS directors will test supporting infrastructure by July 30, 2023.
4. When the reviewer concludes that update (write) access is no longer warranted, the director submits access change request to PantherSoft Security. EMS directors will test supporting infrastructure by July 30, 2023.
5. Testing and full implementation of this process will be completed by October 30, 2023.

Implementation date: October 30, 2023

Complexity rating: 3 - Complex

2.2 The Office of the Provost and AIM have agreed to have the following steps performed:

1. PantherSoft Security, AIM, and functional units will collaborate on the development of a metric data field inventory by May 30, 2023.
2. With consideration of impact on PantherSoft performance and stability, PantherSoft Security will verify that all fields in inventory are auditable by August 30, 2023 (so long as adding audit indicators does not have adverse impact on PS performance).
3. As the primary data owners, the University Registrar, Director of Financial Aid, Director of Admissions Operations, and Director of Student Financial Services and Systems will submit specifications for a set of queries through which they can review anomalous updates to values for all fields included in the inventory by November 30, 2023.
4. Data owners identified in item three will review the results of the queries also identified in item three twice each calendar year. Via a systemized documentation process, PantherSoft Security will support data owners in their efforts to record results of each audit query review by January 30, 2024.

Implementation date: January 30, 2024

Complexity rating: 3 - Complex

- 2.3 During any application update/upgrade by the vendor or by PantherSoft resulting in audit flags being disabled, the PantherSoft Team will implement a process/procedure to review, re-configure and enable audit flags in order to continue to log data changes associated with fields identified as impactful to Performance Based Funding by AIM or other purposes.

Implementation date: April 1, 2023

Complexity rating: 2 - Moderate

APPENDIX I – IN-SCOPE BOG DATA ELEMENTS



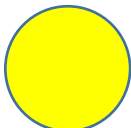



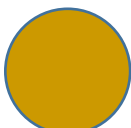
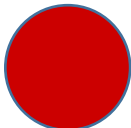

[illegible]

No.	Metric	Definition	Submission/Table/Element Information	Relevant Submission
		admitted as an FTIC student who graduated with a bachelor's degree from a program that requires only 120 credit hours. The gift aid amount includes: (1) financial aid (grants, scholarships, waivers and third-party payments) provided to resident undergraduate students during the most recent academic year; (2) the total number of credit hours for those resident undergraduates. The average gift aid award per credit hour was multiplied by 120 and compared to the sticker price.	02040 - Award Payment Term 02037 – Term Amount Submission: SIF Table: Fee Waivers Elements: 01109 – Waiver Exempt Type 01401 – Term Amount 02041 – Demo Time Frame Table: Courses Taken Elements: 01103 – Student Section Funding Code ² 02041 – Demo Time Frame 01097 – Student Section Credit Table: Enrollment Elements: 02041 – Demo Time Frame 01106 – Fee Classification – Residency (F, R, T) 01060 – Student's Classification Level (L, U)	Summer 2021 Fall 2021 Spring 2022

Definition Source: State University Database System (SUDS).

² Testing for this element was not performed. Upon review of the metric's methodology, it was noted that "All credit hours, regardless of the course budget entity, are included. The only exception is for courses which are taught at the institution reporting the credit but are funded through another SUS institution" which is not applicable to FIU.

APPENDIX II – COMPLEXITY RATINGS LEGEND

Legend: Estimated Time of Completion		Legend: Complexity of Corrective Action	
	Estimated completion date of less than 30 days.		Routine: Corrective action is believed to be uncomplicated, requiring modest adjustment to a process or practice.
	Estimated completion date between 30 to 90 days.		Moderate: Corrective action is believed to be more than routine. Actions involved are more than normal and might involve the development of policies and procedures.
	Estimated completion date between 91 to 180 days.		Complex: Corrective action is believed to be intricate. The solution might require an involved, complicated, and interconnected process stretching across multiple units and/or functions; may necessitate building new infrastructures or materially modifying existing ones.
	Estimated completion date between 181 to 360 days.		
	Estimated completion date of more than 360 days.		Exceptional: Corrective action is believed to be complex, as well as having extraordinary budgetary and operational challenges.

*The first rating symbol reflects the initial assessment based on the implementation date reported by Management, while the second rating symbol reflects the current assessment based on existing conditions and auditor's judgment.

APPENDIX III – OIA CONTACT AND STAFF ACKNOWLEDGMENT:

OIA contact:

Joan Lieuw 305-348-2107 or jliewu@fiu.edu

Contributors to the report:

In addition to the contact named above, the following staff contributed to this audit in the designated roles:

Leslie-Anne Triana (auditor in-charge);
Henley Louis-Pierre (IT auditor in-charge);
Stephanie Price (supervisor and reviewer); and
Manuel Sanchez (independent reviewer).

Definition of Internal Auditing

Internal auditing is an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes.