ANNUAL PROGRAM ASSESSMENT FORM

Name of Program: Computer Information Systems

Report prepared by: Michael Knupp

1) List of degree offerings:

a. BS Computer Information Systems (Current)
b. BS Computer Information Systems / MBA (Current)
c. BS Integrated Technology – CIS (Pre Fall 2023)
d. BS Integrated Technology – CIS / MBA (Pre Fall 2023)
e. BS Computer Information Systems (legacy ~ pre Integrated Technology)
f. BS Computer Information Systems / MBA (legacy ~ pre Integrated Technology)

2) **Progression /Graduation update (NECHE 8)**

Computer Information Systems (CIS) Retention				
Fall Term	**HU or Program**	**1st-2nd Year**	**1st-3rd Year**	**1st-4th Year**
2018	HU	100%	100%	100%
	Program	100%	100%	100%
2019	HU	100%	50%	50%
	Program	100%	50%	50%
2020	HU	67%	100%	100%
	Program	33%	33%	33%
2021	HU	75%	75%	---
	Program	75%	75%	---
2022	HU	100%	---	---
	Program	67%	---	---

Graduation Rates (2011 to 2016 cohorts, legacy BS CIS & BS CIS/MBA programs)

4-year graduation rate = 28 % [43, 30, 43, 0, 38, 13]
5-year graduation rate = 55 % [57, 40, 57, 100, 38, 38]
6-year graduation rate = 57 % [57, 50, 57, 100, 38, 38]

3) **Program's Mission Statement (NECHE standard 1):**

The mission statement of the program is the mission statement for the School of Technology and Innovation (SoTI). The SoTI mission statement aligns to the mission statement of Husson University and the College of Business by emphasizing student engagement, experiential learning, excellence of teaching, and contribution to a greater community.

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"The School of Technology and Innovation provides high quality, student centric, experiential education, delivered by engaged faculty in partnership with the community, to prepare students for professional careers and leadership positions while enhancing regional economic development."

4) **Faculty updates (NECHE Standard 6)**

New Faculty

- There were no new faculty added in direct support of the CIS program.

Grants

- Team effort to secure a $500K grant from the Alfond Foundation. This is the 2nd grant secured from the Alfond Foundation and serves the entire school and not the CIS program exclusively. A 3rd and final grant has been submitted for the upcoming academic year.
- Secured $500K+ Congressional "ear-marked" funds for 2024 – 2025 academic year. These funds support the entire school and are not specifically dedicated to the CIS program.

5) **Program Goals / Strategic initiatives (NECHE Standard 2, 5):**

In prior reports, the programmatic goals and strategic initiatives included elements that were largely outside of the realm of SoTI control. Additionally, the goals did not easily lend themselves to a more granular program viewpoint. After consultation with the Office of Assessment, guidance was provided on how to better craft goals that the SoTI team can directly influence. The goals have a stronger tie to strategic initiatives, have more specific programmatic operational goals, and are positioned for easier assessment. The following is the result of that effort. The strategic goals offered are school level. Where appropriate, operational goals are more program focused.

Strategic Goal	Operational Goal	Assessment Plan	Notes
Build SoTI brand awareness in an effort to increase application submissions and overall enrollment into the SoTI programs.	Specifically through the Outreach Specialist, deepen existing relationships and visitation with regional highschools while expanding the outreach into technical schools, community colleges, and high schools outside of the state of Maine.	Continue with the outreach campaign as led by Ashlie Page and evaluate the effort in spring 2024 as documented by the number of events and number of student contacts. Compare application submissions and tuition deposits of current year against prior years.	Per data from the Outreach Specialist… 90 different individual outreach seminars at 34 unique locations reaching 1306 students.
	Participate in external technology fairs and competitions.	Itemize the number of events participated in with a target of at least 1.	Participated in SkillsUSA 2024 TechSpo
	Serve as host facility for technology related events.	Itemize the number of events participated in with a target of at least 1.	Host site for Husson Alive 2024, Maine Media Camp 2024, and Girls Who Code Camp 2024.

Strategic Goal	Operational Goal	Assessment Plan	Notes
	Enhance and leverage the SoTI website and social media.	Compare the current website against the website from last year and itemize updates/enhancements. Review the activity on social media platforms and evaluate engagement.	Limited to no changes with the various website pages. Perhaps attention will be refocused to the website in 2024-2025. Social media posts continued, but intermittently. Need to better coordinate with Husson Marketing Department.
Mature facilities and curriculum to ensure relevancy, foster student engagement, and promote high academic rigor.	Modernize the Peabody 220 “CIS Lab” with new equipment, new work areas, and new storage solutions	Evaluate lab status in spring 2024 and compare against spring 2023 to show advancement	Peabody 220 modernized with a $30K+ investment. Updates include… new computers, new workstations and storage solutions, new blinds, and new equipment for the students to use in various courses.
	Enhance the IT 241 - IT 242 (Managing and Maintaining a PC 1 & 2) curriculum to include new student activities and new bench PC equipment.	Evaluate curriculum delivery for the academic year and compare against previous year to determine number of enhancements.	Curriculum was enhanced to include more hands-on labs. Labs utilized new equipment that was acquired with Peabody 220 was renovated. Need to include a requirement to complete the TestOut PC Pro certification in next year’s class.
	Enhance the IT 341 - IT 342 (Managing and Maintaining a Windows Server 1 & 2) curriculum to include new student activities and new bench PC equipment.	Evaluate curriculum delivery for the academic year and compare against previous year to determine number of enhancements.	Curriculum was enhanced to include more hands-on labs with virtualization and domain setup. Need to include a requirement to complete the TestOut Server Pro certification in the next running of IT 341/342.
	Enhance the IT 431 (IT Security Principles and Practice) curriculum to include new student activities	Evaluate curriculum delivery for the academic year and compare against previous year to determine number of enhancements.	Curriculum was enhanced to include more hands-on security labs working with tools like Kali-Linux. Additional materials in ethical hacking were included.

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6) **Curricular mapping / Outcome assessment (NECHE Standard 4, 8)**

- Please review and update the current curricular mapping and ensure syllabi reflect the mapping found at the official Husson Mapping Site (HERE)
- Please update the progress made on specific learning outcomes below. If specific external tools are used (i.e. Praxis, Peregrine, etc.) be sure to include them.

Student Learning Outcome	Courses mapped to SLO	Summary of course activities for the given academic year	Action
1. Analyze a complex computing problem and apply principles of computing and other relevant disciplines to identify and apply solutions	IT 241 IT 242 IT 341 IT 342 IT 431 IT 471 IT 481 IT 482	All courses were offered during the current academic year. Professor Lagulos was able to offer IT 431 – Principles and Practice in IT Security for the first time in multiple semesters. His knowledge has advanced this course and will be essential to continue the maturation of the course. Collection of online students in IT 482 created an incredible project the delivered a website centered on recycling.	No action needed. See curriculum enhancements for IT 241/242, IT 341/342, and IT 431 detailed above.
2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline	IT 261 IT 262 IT 331 IT 341 IT 342 IT 410 IT 481 IT 482	IT 261 and IT 262 course projects enhanced to allow for self-selected projects that are guided in an iterative fashion. More documentation and reflection added in the project requirements.	No specific actions needed.
3. Communicate effectively in a variety of professional contexts	IT 241 IT 242 IT 261 IT 262 IT 351 IT 410 IT 431 IT 471 IT 481 IT 482	As mentioned above, more written documentation and presentations were added for course projects in IT 261 and IT 262.	IT 351 professional journaling can be advanced to include some directed prompts in order to push targeted reflection on certain IT related topics.

Student Learning Outcome	Courses mapped to SLO	Summary of course activities for the given academic year	Action
4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles	IT 241 IT 242 IT 331 IT 431 IT 471	IT 431 enhancements pushed us further into the professional responsibilities of IT security.	In general, SoTI culture needs to evolve to push the overall professionalism standards for our students. Each course should have more targeted areas with regards to legal and ethical issues.
5. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline	IT 351 IT 482	Positive results from the internships and the small group in IT 482 completed a great group project in game design and development.	No formal action required outside of standard advancement and maturation of course offerings.

The Peregrine Exam is delivered in the IT 482 - IT Project Development class that all CIS and Software Development students take. The results are not parsed for only CIS students. They represent the larger student body of the school. Results and notes have been updated for the data covering the 2023 – 2024 academic year.

Student Learning Outcome	Assessment Tool & Results	Notes
Direct: At least 80% of all graduating IT majors will score in the 50th percentile or higher in comparison to other peer institutions.	Peregrine Capstone Examination 2/4 = 50% (Percentiles for 4: 11, 46, 79, 96) 4 students completed the exam. Aggregate raw score for the cohort was 54 %. The individual exam scores are 44, 50, 58, 66.	No action items at this time.
Direct: On the IT 482 capstone project, at least 80% of all graduating IT majors will demonstrate acceptable or exemplary levels (A or B).	IT 482 I.T. Project Development – Capstone 4/5 = 80 % (6 students: A, A, A, A, F)	Students in this cohort did exceptionally well in the capstone course.
Indirect: The Peregrine Exit survey targets 10 individual IT related goals. Student self-assess each goal as either Strongly Agree, Agree, Neutral, Disagree or Strongly Disagree Assessment Target: At least 90% of the questions will be answered with an average value of 4 or greater (4 = agree, 5 = strongly agree).	Peregrine Exit Survey 4 students took the exit survey <u>Average Value for Each Question</u> Q1 = 4.00 Q2 = 4.05 Q3 = 3.75 Q4 = 4.19 Q5 = 4.20 Q6 = 4.10 Q7 = 3.76 Q8 = 3.55 Q9 = 4.05 Q10 = 3.85	6/10 questions were above the 4.0 threshold with 4 questions at or above 3.5. No student reported a score lower than 3 (neutral) on any question. See Appendix I for the specific verbiage of these ten questions. The questions touch each of the 5 core program outcomes, which can be viewed in Appendix II. Q8 addresses databases. The IT 410 Database Design class has been offered online in 7 weeks. In Fall 2024, the class will be offered in person over 15 weeks.
Indirect: IT 351 Employer Evaluation. At least 80% of all graduating students will receive a mean score of 4.0 (agree / strongly agree) on their internship employer evaluation.	Employer Evaluation 2023 SS: 7/7 2023 FA: 0/0 2024 SP: 3/3 10/10 (100%) met the mean score of 4.0 or higher.	Employer evaluations continue to come back very high.

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7) **Executive Summary:**
   - Please provide a summary of the major findings of the annual report.
   - Be sure to address all that are applicable:
     - Significant achievements
     - Identified opportunities
     - Identified threats or challenges
     - Adequacy of resources
     - Budgetary considerations

Last year's report noted that the Computer Information Systems program was partially a return to our roots and that the fall of 2023 would be the first fall with the revised degree. The CIS program offers 2 degree options; BS and BS/MBA. The data supports a solid upward trend in interest in the program and we are optimistic this will continue.

On the academic side, we continue to see positive growth. Last year's report noted that IT 241 - Maintaining and Managing a PC 1 ran with a full cohort for the 1st time in 3 years. I am pleased to report that the course ran last fall with a solid cohort and there are currently 15 students signed up for the upcoming fall semester. Additionally, for the first time in our history, we are offering 2 sections of IT 331 - Networking in the fall. There is a dedicated section of HE 111 - Husson Experience set up for the fall with a current enrollment of 27. Lastly, IT 410 - Database Design has been run online in a 7 week format for the last several years with only a few students in each section. The course is being offered this fall as an in-person section over the 15 week term. There are currently 17 students enrolled.

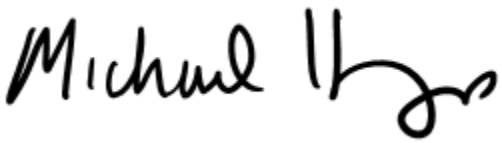
The facilities to support the CIS program also continue to be improved. The refresh of Peabody 220 that was eluded to last year was completed. Over the summer of 2023, the lab was completely overhauled with new student PCs, a new instructor PC, new work surfaces and storage, and other positive aesthetic changes in the room. The modernization of the space not only serves our current students, but also provides a marketable space for prospective students.

As with last year, budget support remains strong for the program. We will need to continue to maintain a small yearly capital budget for the program. There are some monies available from previous Alfond grants and work is underway to secure a third grant. Additionally, the Congressional earmarked funds for STEM education will surely have a positive impact on our programs and the student experience.

Looking forward into the next academic year, we will focus on maturing the assessment of the CIS program and elevating individual courses. Future efforts with regards to recruitment will continue to ensure the program has a viable student base. We are optimistic that the trend with application counts will continue and that the number of tuition deposits will continue to grow. Enhancing our marketing through outreach and our online presence will continue to play a key role.

All in all, the program is strong and is on track to continue to gain strength and advance. There are some data visualizations that follow this summary that help to tell the story of positive growth in program interest and enrollment.

Thanks,



Michael Knupp, PhD
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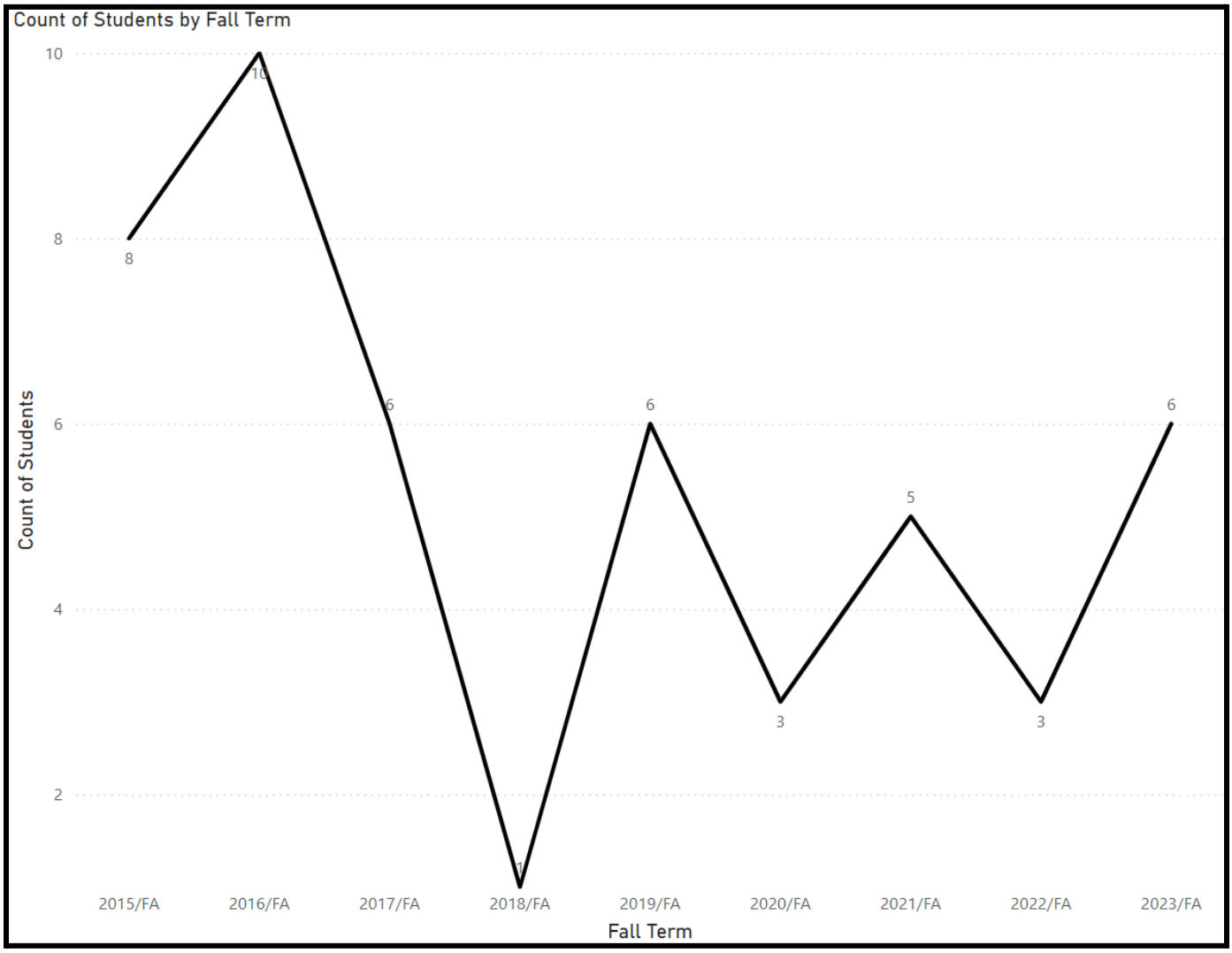
Overall Program Health Data

Enrollment trends - monitoring enrollment is a vital part of assessing the overall health of a program. SoTI is in a building phase and the Computer Information Systems program is showing slow, but steady growth. The graphs below provide visual support of the upward enrollment trends.

Enrollment trends for Entry First Year and Transfer CIS students



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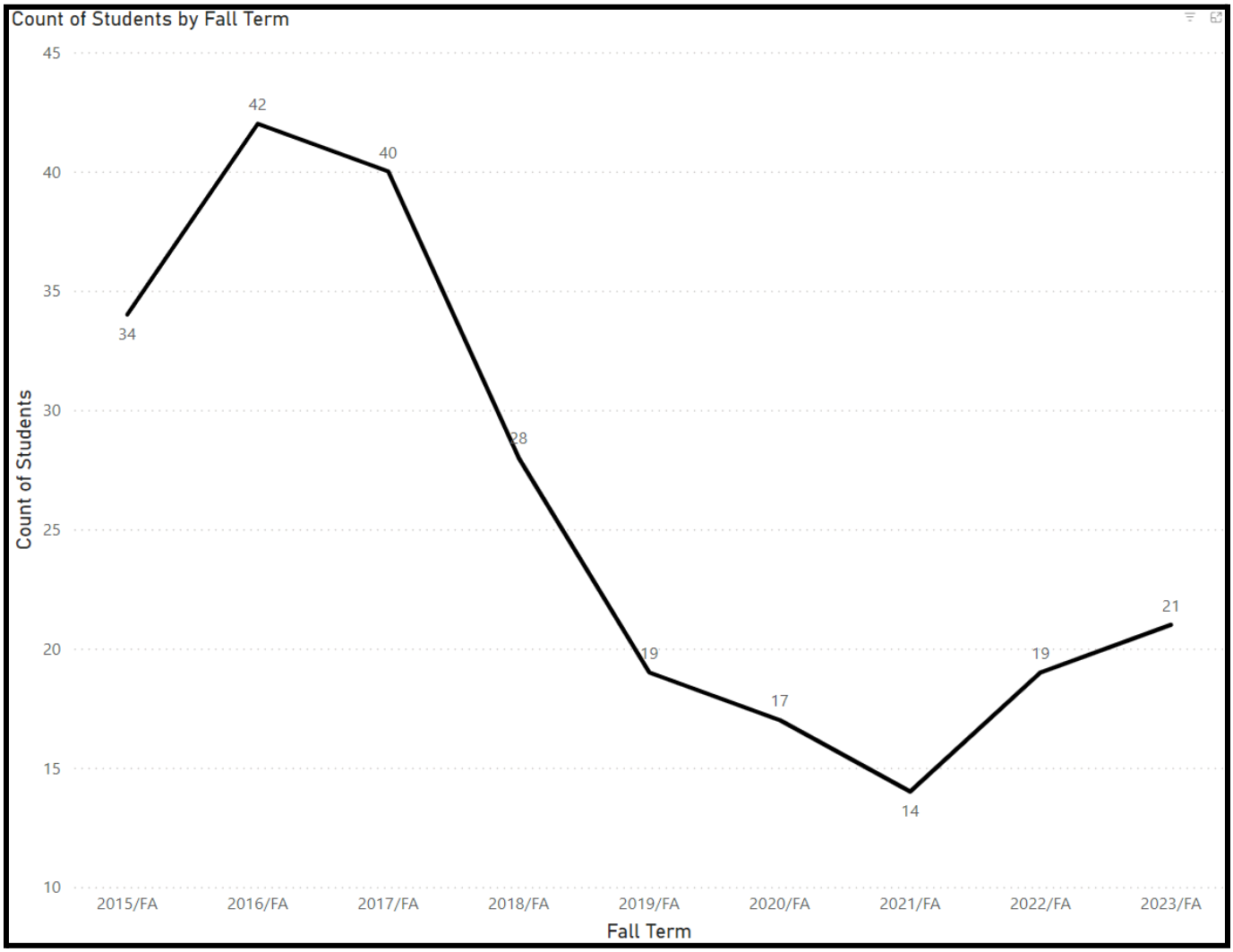
Enrollment trends for All CIS students



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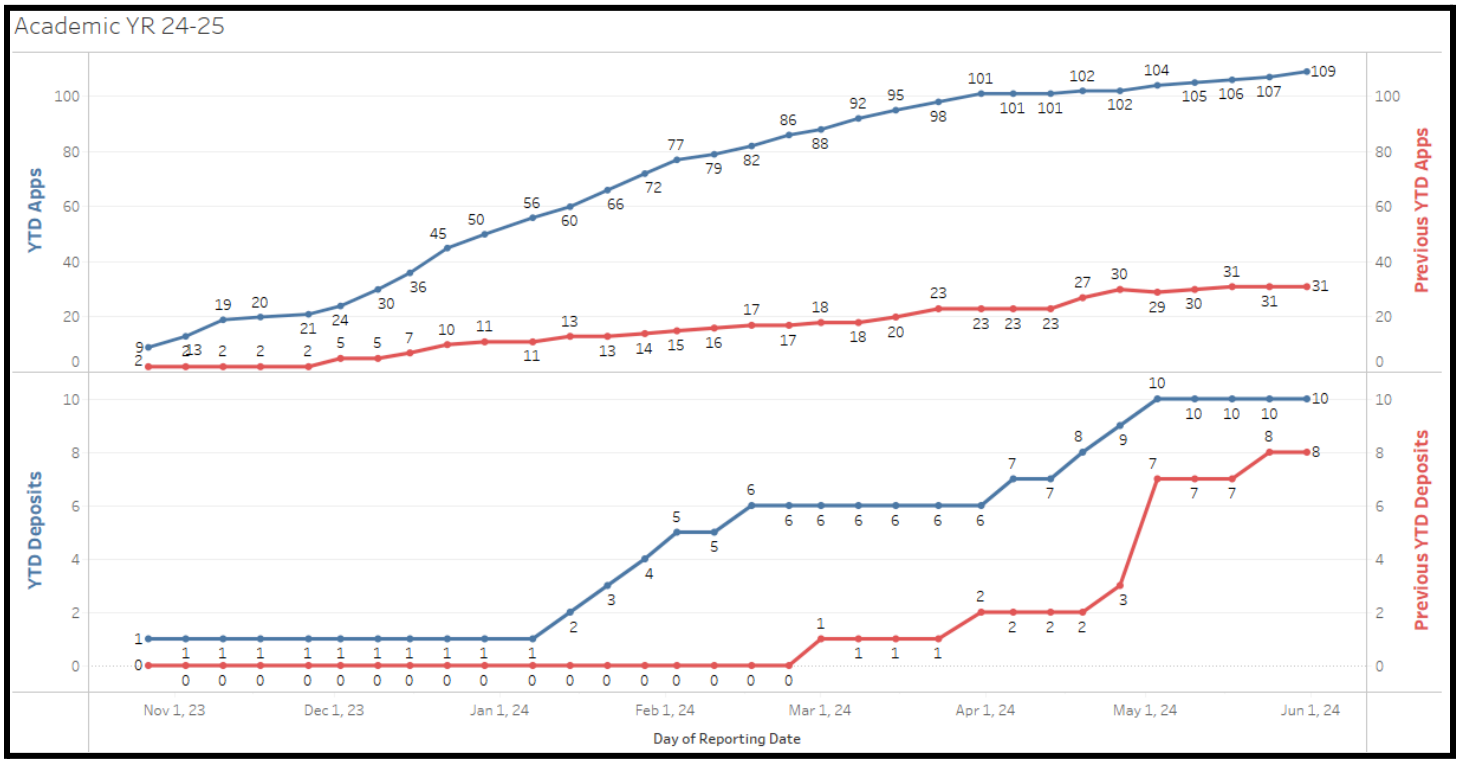
The following chart shows the tremendous growth in the CIS applications from the previous year. The blue trend lines reflect the upcoming 2024-2025 academic year and the red trend lines reflect the previous year of 2023-2024. It is worth noting that the tuition deposits have not shown the dramatic increase that applications show. We believe this was heavily influenced by the FASFA issues. Regardless, the increase in application count is impressive and a measure of the value of the collective effort in outreach.



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Appendix I

Ten targeted IT questions included on Peregrine Exit Survey:

1. I am able to integrate the core areas of business to inform my decision making.
2. I am able to apply legal and ethical principles in business to organizational decision making.
3. I am able to apply business-related quantitative and qualitative methods and tools to formulate management decision alternatives.
4. I am able to demonstrate leadership skills.
5. I am able to demonstrate professional business communication.
6. I have the ability to work with diverse colleagues in team situations.
7. I am able to demonstrate knowledge of computer hardware and software infrastructure.
8. I am able to construct appropriate database solutions using computer software.
9. I am able to apply project management practices and principles.
10. I am able to utilize computer technology solutions to address business policies and practices.

Appendix II

Programmatic outcomes were formalized in 2018 – 2019 academic year and amended slightly in 2020 – 2021 to draw focus and attention to the five key nouns that each programmatic outcome aligns to. In 2023, in an effort to ensure applicability across all three SoTI programs, “and apply” was added to Program Outcome 1.

Program Outcome #1: **[Problem Solvers]** Analyze a complex computing problem and apply principles of computing and other relevant disciplines to identify and apply solutions.

Program Outcome #2: **[Creators]** Design, Implement and Evaluate a computing-based solution to meet a given set of computing requirements in the context of the program’s discipline.

Program Outcome #3: **[Communicators]** Communicate effectively in a variety of professional contexts.

Program Outcome #4: **[Professionals]** Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.

Program Outcome #5: **[Collaborators]** Function effectively as a member or leader of a team that is engaged in activities appropriate to the program’s discipline.

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