

## College of Sciences - Strategic Plan (2024-2027)

### Overview

In 2022, UCF revealed its new strategic plan, ***Unleashing Potential: Becoming the University for the Future***. A roadmap to achieving preeminence as a university as well as a Top 50 Public Research University by 2027, the strategic plan focuses on four key priorities: (1) student success and well-being, (2) discovery and exploration, (3) community and culture, and (4) innovation and sustainability. As the largest college in the university with more than 70,000 alumni and extensive connections to STEM career fields through eight departments, two schools, and a number of centers and institutes, The College of Sciences (COS) is essential to achieving that vision.

Currently, 22 percent of all undergraduates and 11 percent of all graduate students are choosing COS degrees, providing a natural opportunity for the College to have significant impact for UCF to meet the goals and metrics outlined in the strategic plan and become the “university for the future.”

*“...we remain committed to unleashing potential in people, organizations, ideas, and the communities we serve. That charge inspires us and illuminates fantastic possibilities ahead. As the University for the Future, we aspire to be innovative in higher education and among the most impactful universities in the country.”*  
- UCF Strategic Plan (2022-2027)

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*COS will provide a world-class education in an environment where faculty, staff, and students thrive, research flourishes, and our community prospers while building a reputation for its commitment to discovery, rigorous experimentation, creative exploration, and accessibility.*

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COS encompasses an expansive range of natural and social sciences, as well as creative disciplines, to harness the power of interdisciplinary engagement at all levels of systems, from subatomic particles to systems of galaxies, from cells to entire ecosystems, and from the individual to larger societies. Through sharing and applying knowledge, COS is cultivating pathways for students to solve our world’s most pressing and complex problems. As part of the university’s overall strategic vision, COS will provide a world-class education in an environment where faculty, staff, and students thrive, research flourishes, and our community prospers while building a reputation for its commitment to discovery, rigorous experimentation, creative exploration, and accessibility.

### Planning

The Dean’s Strategic Plan Committee was convened in 2023 to commence development on a strategic plan for COS in alignment with the university-wide plan. The committee members represented a

diversity of disciplines across COS and engaged with the campus community in the initial stages of formulating the strategic plan. The committee also constructed and deployed a survey for the faculty and staff of the College of Sciences to obtain feedback on the strategic planning priorities. The survey resulted in 164 complete responses, with 67% of respondents identifying as faculty, and this input is included. This inclusive process includes rounds of review with opportunities for feedback from the committee and COS leadership in the drafting stages.

### The Dean's Strategic Plan Committee

Dept/School	Committee Member	Title/Role
<b>Anthropology</b>	John Walker	Associate Professor
<b>Biology</b>	Michelle Gaither	Associate Professor
<b>Chemistry</b>	Stephen Kuebler	Professor, Innovation & Research Co-chair
<b>Mathematics</b>	Carlos Borges	Assistant Professor
<b>Physics</b>	Daniel Britt	Pegasus Professor
<b>Psychology</b>	Daniel McConnell	Senior Lecturer, Student Success Co-chair
<b>Sociology</b>	Alison Cares	Associate Professor
<b>Statistics &amp; Data Science</b>	Larry Tang	Professor
<b>Nicholson School of Communication and Media</b>	Jennifer Sandoval	Associate Professor, Community & Culture Co-chair
<b>Florida Interactive Entertainment Academy</b>	Benjamin Noel	Faculty Administrator, Executive Director of FIEA
<b>School of Politics, Security, &amp; International Affairs</b>	Annabelle Conroy	Associate Lecturer
<b>COS STAFF</b>	Patrick Maloney	Lab Manager, Chemistry, Facilities
<b>COS STAFF</b>	Anthony Pomonis	Executive Director for Advancement
<b>COS STAFF</b>	Venessa Nieves	Post Award Manager

### Strategic Plan Pillars

The College of Sciences has honed its strategic plan into three core pillars—student success, research and innovation, and community and culture—that will support the four priority areas (student success and well-being, discovery and exploration, community and culture, and innovation and sustainability) of the university-wide strategic plan: ***Unleashing Potential: Becoming the University for the Future.***

## Student Success

As the largest college, conferring the highest number of degrees each year, COS has a strong track record of providing high quality and accessible education to a large community of diverse students. COS is

focused on creating the university for the future by enhancing student success through a multifaceted approach, focusing on the following five goals:

- 1) Expand support for undergraduate students
- 2) Improve four-year graduation rates for FTIC (First Time in College) students and three-year graduation rates for transfer students
- 3) Enhance professional development for faculty and staff
- 4) Increase recruitment and retention for faculty and graduate teaching assistants (GTAs)
- 5) Support graduate student success and improve six-year graduation rates

#### **Expand support for undergraduate students**

Undergraduate students may face obstacles to their learning that can hinder progress toward degree completion in four years—from financial challenges to setbacks from mental or physical health. To enable success for students, COS can take steps to share resources and services that UCF provides and build upon existing efforts. Through expanded and new initiatives, COS will augment the support system for students and connect individuals with resources they need.



Objectives	Initiatives
<p>Improve FTIC first-year student retention to 95% by 2027 (93.5% in 2022).</p> <p>Increase percentage of COS graduates enrolled (in graduate school or other programs) or employed to 65% in 2027 (59% in 2020).</p>	<ul style="list-style-type: none"> <li>Expand the UCF Undergraduate Teaching and Learning Assistants Program (UCF UTA-ULA) at COS.</li> <li>Expand peer-mentoring to integrate students with a variety of experiences (e.g., FTIC, transfer, first gen).</li> <li>Consider opportunities (e.g., training) to improve culturally responsive mentorship strategies.</li> <li>Create career-readiness courses (or equivalent professional development) within each major and program.</li> <li>Increase awareness of existing support services (e.g., Student Academic Resource Center, or SARC, support; Supplemental Instruction, or SI, sessions; The University Writing Center, or UWC).</li> </ul>
Develop metrics and related processes geared toward student outcomes.	<ul style="list-style-type: none"> <li>Partner with Institutional Knowledge Management (IKM) to improve data acquisition and analysis.</li> </ul>

	<ul style="list-style-type: none"> <li>• Develop processes that encourage two-way dialogue/feedback with students.</li> <li>• Create approaches (and aligned metrics) to identify and support at-risk students.</li> </ul>
Increase access to financial resources for students.	<ul style="list-style-type: none"> <li>• Communicate opportunities to access Open Educational Resources (OER) and Affordable Instructional Materials Initiative (AIM) with students and faculty.</li> <li>• Collaborate with The Center for Distributed Learning (CDL) to support faculty development of OER course materials (published via UCF Pressbooks).</li> <li>• Consider innovative ways to decrease financial pressures for students (e.g., improved integration with existing programs, such as Knights Pantry; creation of in-house educational materials).</li> </ul>

**Improve four-year graduation rates for FTIC students and three-year graduation rates for transfer students**

A key metric for achieving preeminence as a university is ensuring that 60% of undergraduate FTIC students complete their degrees within four years. Timely degree completion (three years for transfer students; four years for FTIC students) also benefits students, reducing financial expenses for education and enabling students to commence their chosen careers.



Objectives	Initiatives
Achieve four-year graduation rate for 70% of FTIC students and three-year graduation rate of 60% for transfer students by 2027.	<ul style="list-style-type: none"> <li>• Consider ways to align faculty support for classes (including prioritized staffing for required classes with waitlists).</li> <li>• Increase summer course offerings (including online sections) with consideration of gaps in student degree progression.</li> <li>• Create dedicated website for student resources and share through a variety of communication channels.</li> <li>• Identify barriers facing transfer students (such as “transfer shock”) and facilitate strategies to enhance success.</li> </ul>

	<ul style="list-style-type: none"> <li>Enhance opportunities to build communication and understanding between faculty and students.</li> </ul>
Increase number of students participating in courses with High Impact Practices (HIP).	<ul style="list-style-type: none"> <li>Encourage faculty to enhance student learning (e.g., HIP course designations, mentorship, Honors Undergraduate Thesis).</li> <li>Expand external industry connections where HIP learning opportunities for students are accessible.</li> </ul>

### **Enhance professional development for faculty and staff**

Professional development for faculty and staff can positively impact student outcomes as well as improve the learning environment. Students learn differently and appropriate instruction methods can enhance learning. By considering pathways to enhance development for faculty and staff and incorporating inclusive design practices, COS can improve student outcomes and individuals' progress toward degrees.

Objectives	Initiatives
Improve teaching and learning effectiveness by increasing the percentage of students who successfully complete each class.	<ul style="list-style-type: none"> <li>Develop, share, and encourage incorporation of inclusive design by faculty (e.g., summary syllabi, sharing best practices).</li> <li>Provide opportunities for faculty development connected to teaching and learning (e.g., Faculty Center for Teaching and Learning workshops, mini-conferences, professional conferences).</li> <li>Consider professional development for staff to support the learning environment.</li> </ul>

### **Increase recruitment and retention for faculty and graduate teaching assistants (GTAs)**

Faculty and graduate teaching assistants are central in supporting student success. Identifying ways to support these key roles within COS through meaningful strategies, such as aligned workloads and additional financial resources, will help to support student success outcomes.

Objectives	Initiatives
Improve retention of faculty and GTAs across departments.	<ul style="list-style-type: none"> <li>Evaluate GTA and faculty workloads across all departments and consider opportunities for improvement.</li> <li>Review class offerings each semester and explore opportunities to improve student-to-faculty ratios.</li> <li>Evaluate opportunities for potential salary increases for faculty most effective in teaching and learning outcomes.</li> </ul>

Increase graduate stipends across the College to align with national median pay and ensure national competitiveness.	<ul style="list-style-type: none"> <li>Review current stipend rates and conduct comparison analysis; consider strategies.</li> </ul>
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### Support graduate student success and improve six-year graduation rates

Graduate students are striving for excellence in their respective fields and faculty and staff can play a role in enhancing intellectual development and encouraging every student in their learning journey and academic outcomes. Leveraging current programs and exploring possible initiatives to improve graduate student success, as well as enhancing financial support for graduate students, can support the workforce of the future while enriching student experiences at UCF.

Objectives	Initiatives
Enhance financial support for graduate students.	<ul style="list-style-type: none"> <li>Increase funding to support conference travel for graduate students.</li> <li>Explore additional opportunities to provide support to graduate students.</li> </ul>
Improve six-year graduation rates.	<ul style="list-style-type: none"> <li>Review IKM data to identify opportunities for programs to retain graduate students and facilitate degree completion in six years.</li> <li>Conduct a comprehensive review of programs with low six-year graduation rates and apply appropriate solutions.</li> </ul>

## Research and Innovation

COS produces nationally and internationally recognized research across the depth and breadth of its departments, schools, and centers, institutes, and initiatives. By encouraging faculty and students to engage in innovative research, exploration, and creative work, the College can be a part of helping to answer important questions—from coastal preservation to enhancing national security to storytelling through news, film, and art from different lived experiences. COS is supporting innovation and research through the following four goals:

- 1) Expand external funding
- 2) Increase industry partnerships
- 3) Streamline processes
- 4) Support collaboration





### **Expand external funding**

A primary source of research and innovation is external funding through foundations, organizations, donors, and other award and grant resources. Faculty and staff within COS are actively engaged in ongoing research and the search and application process for additional opportunities. However, applying for funding is increasingly competitive, and each award or grant application requires time and attention. By identifying ways to support this essential activity, COS can improve research, exploration, and discovery at UCF and support UCF in becoming a Top 50 Public Research University.

Objectives	Initiatives
Increase percentage of Tenure Earning and Tenured faculty with an active grant to 80% by 2027 (75% in 2022).	<ul style="list-style-type: none"> <li>• Increase pre and post-award staff support for proposal development.</li> <li>• Support faculty with active grants and awards through tangible and intangible strategies (e.g., appropriate space allocation for funded projects, integrated communication planning).</li> <li>• Examine current funding and support for graduate students and post-docs and consider opportunities to enhance active research agendas.</li> <li>• Provide proposal training and submission support across COS.</li> <li>• Examine staff support for awards and allocate teams to ensure successful outcomes.</li> </ul>
Increase the number of graduate research assistantships (GRAs) and post-docs.	<ul style="list-style-type: none"> <li>• Encourage faculty to consider project scoping for GRAs and post-docs on grant applications.</li> <li>• Identify and share case studies of GRA and post-doc support across the College.</li> </ul>
Increase number of Tenure-Earning faculty.	<ul style="list-style-type: none"> <li>• Identify funding support for attracting and retaining high-quality research faculty.</li> </ul>

### **Increase industry partnerships**

According to the university's strategic plan, "UCF's knowledge enterprise is an essential driver of the region's economic vitality." An essential ingredient in the university's research infrastructure is external partnership. Local and regional organizations have a vested interest in industries that tie directly into the natural and physical sciences as well as the creative work that takes place daily in COS. Identifying, establishing, and building partnerships is a core part of UCF's shared future with Central Florida.

Objectives	Initiatives
Identify possible research projects in each department, school, and center, institute, and initiative at COS for external partnership.	<ul style="list-style-type: none"> <li>• Identify and curate a shared resource across the College for industry forums, meet and greets, and idea incubators; track and monitor status to ensure appropriate engagement.</li> </ul>

	<ul style="list-style-type: none"> <li>Facilitate engagement with industry leaders and alumni through Dean's Advisory Board, COS alumni board, and UCF Foundation and Advancement team.</li> </ul>
Increase funding for applied initiatives with government agencies.	<ul style="list-style-type: none"> <li>Create opportunities for faculty and staff to liaise with university partners in government agencies, leveraging existing projects and connections within UCF and COS.</li> <li>Construct and maintain a detailed list of faculty expertise and projects to share with partners.</li> <li>Build outreach efforts to increase exposure of faculty expertise to government agencies.</li> </ul>

### **Streamline processes**

The roadmap to unleashing the potential of all people requires the optimization of existing resources. By better understanding current systems and efforts and streamlining administrative processes, COS can augment research support, enabling sustainable and integrated approaches for faculty, students, and collaborators.

<b>Objectives</b>	<b>Initiatives</b>
Spearhead innovation in the award application and support process.	<ul style="list-style-type: none"> <li>Conduct regular assessment of staff and faculty workloads for grants and awards to ensure appropriate levels of support.</li> <li>Crowdsource ideas for streamlining and innovating processes from faculty, staff, and GRAs, GTAs, and post-docs, and incentivize winning solutions.</li> <li>Enhance metrics to better measure and assess support throughout the award process.</li> </ul>

### **Support collaboration**

Research projects are supported by a range of staff and faculty with different areas of expertise. By leveraging the broad scope of experience across the College and improving collaboration between teams and units as well as between colleges, COS can enable interdisciplinary practices that fuel innovation.

<b>Objectives</b>	<b>Initiatives</b>
Improve intercollegiate collaboration across the university and collaboration within the College of Sciences across departments and disciplines.	<ul style="list-style-type: none"> <li>Engage Faculty Cluster Initiatives to share best practices and develop working opportunities within COS.</li> <li>Create and maintain a readily accessible faculty list with keywords of expertise.</li> <li>Develop a College-wide seminar for interdisciplinary teams.</li> </ul>



## Community and Culture

As the largest college at UCF, COS employs a large and diverse group of faculty and staff. The complexity of the College provides both challenges and opportunities for community and culture, with its people serving as its greatest asset. COS aims to be a destination workplace with an inclusive culture for all. COS will help unleash potential in its people through the following three goals:

- 1) Increase staff recruitment and retention
- 2) Attract and retain excellent faculty across diverse backgrounds
- 3) Build and deepen alumni engagement

### **Increase staff recruitment and retention**

COS has a complex structure across disciplines, departments, and campuses supported by a broad base of staff with critical expertise—from award support to budgeting to human resources to marketing and communications. By recruiting and retaining high-performing staff and boosting support for all lines of staff work, COS can improve its internal culture and better support connection with the larger community of stakeholders.

Objectives	Initiatives
Recruit high-performing staff.	<ul style="list-style-type: none"> <li>Enhance levers (elements within a system or process that can be modified to change the overall outcome of the system or process) within search and hire process for key staff roles.</li> <li>Engage in salary analyses to ensure competitive packages can attract top talent.</li> </ul>
Increase staff retention (as measured by 5- and 10-year persistence levels).	<ul style="list-style-type: none"> <li>Assess compensation ratios across staff roles (measures a person's or group's salary against a salary range midpoint for the same or similar positions at other organizations).</li> <li>Assess workloads for current staff and identify opportunities to better prioritize work.</li> <li>Identify advancement and development opportunities for staff.</li> <li>Deploy and engage effective training in effective and inclusive management for supervisors and faculty.</li> <li>Review work policies with workload needs and consider opportunities to make changes that improve staff retention (e.g., remote work time).</li> </ul>

	<ul style="list-style-type: none"> <li>Identify and measure metrics that are helpful in improving retention (e.g., trends in exit interviews, attrition rates).</li> <li>Create touchpoints (with aligned processes) that engage staff on workload and job satisfaction.</li> <li>Invite staff feedback on enhancing culture and climate throughout the academic year.</li> </ul>
Implement tools that cultivate a positive work culture for staff.	<ul style="list-style-type: none"> <li>Augment opportunities to highlight staff efforts.</li> <li>Create physical and/or virtual ‘water cooler’ communities where staff and faculty can connect and socialize during regular work hours.</li> <li>Sponsor on-campus and off-campus events for staff and faculty to interact with external members of the community (e.g., hosting a College Family Fun Day, lotteries for UCF sporting event tickets).</li> </ul>

#### **Attract and retain excellent faculty across diverse backgrounds**

COS aims to have a reputation for a world-class education in a wide range of natural and social sciences. As the largest university in Florida, a designated Hispanic Serving Institution (HSI), and an emerging Minority Serving Institution (MSI), expanding efforts to diversify and retain faculty across a wide range of lived experience will positively impact student well-being and success.

<b>Objectives</b>	<b>Initiatives</b>
Increase recruitment of faculty from a broad base of institutions.	<ul style="list-style-type: none"> <li>Develop levers (elements within a system or process that can be modified to change the overall outcome) for “active recruitment” across all departments (e.g., posting job openings in relevant job boards, attending external events to meet and engage potential candidates).</li> <li>Examine current recruitment and hiring procedures to ensure alignment with best practices.</li> <li>Gather and regularly track application data trends.</li> </ul>
Increase 10-year persistence rate and maintain five-year persistence rate among faculty.	<ul style="list-style-type: none"> <li>Consider ways to leverage College level clusters for recruitment efforts.</li> <li>Enhance mentorship opportunities and other resources for faculty (e.g., hosting a Writer’s Room where faculty can collaborate on research and administrative tasks).</li> </ul>

	<ul style="list-style-type: none"> <li>• Identify and measure metrics that are helpful in improving retention (e.g., identify trends in exit interviews, analyze attrition rates, COACH surveys, use ADVANCE and INCLUDES grants).</li> <li>• Create touchpoints (with aligned processes) that engage faculty on workload and job satisfaction.</li> <li>• Invite faculty feedback on enhancing culture and climate throughout academic year.</li> </ul>
Implement tools that cultivate a positive work culture for faculty.	<ul style="list-style-type: none"> <li>• Highlight faculty efforts to improve student success.</li> <li>• Create physical and virtual ‘water cooler’ communities where staff and faculty can connect and socialize during work hours.</li> <li>• Sponsor participation in on-campus and off-campus events for faculty to interact with external members of the community (e.g., hosting a College Family Fun Day, lotteries for UCF sporting event tickets).</li> </ul>

#### **Build and deepen alumni engagement**

COS confers the highest number of degrees each year at UCF, resulting in a large and diverse alumni base. By cultivating ways to actively engage COS’ 70,000 alumni, the College can build a robust community and enhance tangible and in-kind commitments that support a brighter future for UCF and the Central Florida region.

<b>Objectives</b>	<b>Initiatives</b>
Increase number of active alumni.	<ul style="list-style-type: none"> <li>• Identify strategies to support alumni engagement (e.g., enhance collaboration among staff, create opportunities to engage alumni).</li> <li>• Leverage current Alumni Board and other mechanisms to build potential connections with alumni and sustain longevity of relationships.</li> <li>• Leverage data and relationships across advising centers and faculty to enhance alumni connections.</li> <li>• Identify specific initiatives that connect to the passions, philanthropy, and careers of successful alumni.</li> </ul>

## Implementation and Evaluation

The COS strategic plan is an important step forward to support the university-wide strategic plan to unleash the potential in all people. By engaging in the listed initiatives, COS can play a vital role in improving student success, fostering a culture of research and innovation, and promoting inclusion and access within and beyond the COS community. The outlined steps and evaluation metrics will support a successful rollout of the strategic plan, with ongoing assessment and adjustments made to track progress and ensure success.



### Next Steps

- Prioritize goals within each plan pillar
- Identify next steps/activities for each initiative
- Assign and engage individuals and teams responsible for each initiative
- Establish timelines for milestones and check-ins
- Ensure alignment with UCF's strategic plan throughout process

### Overall Key Performance Indicators

- Graduation rates (4 years for FTIC students, 3 years for transfer students, 6 years for PhD students)
- Faculty and staff recruitment and retention rates
- Research funding levels
- Faculty participation rate in sponsored research and creative works
- Number and quality of external partnerships
- Staff satisfaction survey measures
- Faculty satisfaction survey measures
- Alumni engagement measures
- Establishment of streamlined and innovative processes

*Questions and comments regarding this strategic plan can be directed to the Dean's office.*