

Undergraduate Retention at UCR: Preliminary Analysis and Recommended Actions
Office of the Provost; Division of Undergraduate Education
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Background

To help guide investments in support of our 2030 graduation rate goals, Provost Watkins requested an analysis of undergraduate student retention data. Currently this data exists in multiple separate locations including Banner, Degree Works, Slate, and Canvas, which creates challenges for access and analysis. In 2023, ITS initiated a project to connect these sources, clean up the data, and facilitate analysis and reporting with a cloud-based tool called Looker. At the time of this writing, the ITS project is ongoing. This report provides interim guidance for campus leaders using our available data, and is not meant to preclude other strategies which the available data is unable to inform.

Why are students leaving?

Our most comprehensive data on student retention currently comes from The Registrar's Office. When a student asks to withdraw from the university, the Registrar asks them to provide a reason. Although some students decline to state a reason, and others simply stop showing up for classes and communicating with the campus, we have reasons for ~2600 student withdrawals over the past 10 years:

Reason	Number	% of total
Academic dismissal	764	29.2%
Other academic problems	394	15.0%
Transfer to another school	389	14.9%
Personal health reasons	389	14.9%
Financial reasons	277	10.6%
Family problem/emergency	268	10.2%
Occupational/Professional	62	2.4%
Relocation/military service	40	1.5%
Unable to get classes	36	1.4%

According to these data, over 44% of the students who withdrew from the university did so because of academic challenges. Another 35% of the students who withdrew did so because of health, family, or financial ("wellness-related") challenges. A somewhat smaller but still significant 15% transferred to another school. These three categories comprise nearly 95% of all students who withdrew.

Some advising professionals believe that some (perhaps many) instances of academic challenges reported by departing students have non-academic causes, implying that these data may overstate the impact of academic challenges on persistence. The Degree Completion Program, led by University Extension, has spoken with 232 students who left UCR between 2008 - 2020 and are now interested in returning. During phone interviews, students were given the opportunity to state multiple reasons for leaving. Overall, 311 reasons were provided:

Reason	Number	% of total
Academic concerns/dismissal	100	32.2%
Personal development/exploration	62	19.9%
Family obligations	44	14.1%
Finances	40	12.9%
Medical issues	17	5.5%
Other	48	15.4%

Academic challenges comprise a smaller proportion (32.2%) than in the Registrar's data. Wellness-related challenges represent a similar proportion (32.5%). Personal development/exploration also is significant at nearly 20% but this category is not available in the Registrar's data for comparison. Conversely, students who transferred from UCR and appear in the Registrar's data are unlikely to appear in the Degree Completion data.

Using UCR's fall 2019 cohort as a model, below is roughly what annual retention looks like in order to get to a 76% 6-year graduation rate (assuming all students retained into the 6th year graduate that year):

Year	Cohort size	Withdrawn	Retained
1	4750		
2	4075	675	91%
3	3625	450	82%
4	3525	100	79%
5	3425	100	77%
6	3375	50	76%

This means we are losing close to 1400 students per year, or about 6% of the student body, with the largest drop occurring between year 1 and year 2 followed by the drop between year 2 and year 3. Combining the more comprehensive Registrar's data with this model, we can estimate the contribution of each reason for withdrawal to the 24% gap in our 6-year graduation rate:

Academic Dismissal	6.9%
Other academic problems	3.6%
Transfer to another school	3.5%
Personal Health Reasons	3.5%
Financial Reasons	2.5%
Family problem/emergency	2.4%
Occupational/Professional	0.6%
Relocation/military service	0.4%
Unable to get classes	0.3%

In other words, if we could prevent all academic dismissals from happening, we would expect the 6-year graduation rate to be 6.9% higher. Etc. Viewed this way, academic challenges account for 10.5% of our 24% retention gap, wellness challenges (health, family, financial) account for 8.4%, and transfers account for 3.5%.

Do we have any good predictors of non-persistence?

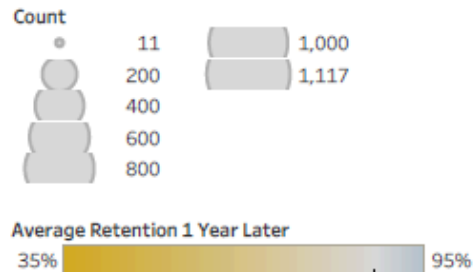
Within the category of academic reasons, we have some understanding of which students are most at risk for not persisting. A recent analysis by Institutional Research shows that lower initial math or writing placement combined with low numbers of AP/IB credits earned and low first-term GPA is a strong predictor (below). The recent retention rate for these students is around 63% compared to 92% for all other students. This is also a relatively large group of students (16% of the cohort) meaning that improvements among this group will benefit many students and also have a noticeable impact on the campus-wide retention rate.

Retention Characteristics and Student Cohort Size

First-Term GPA Range	AP/IB Range	Combined Placement	
		Lower Math or Writing	All others
Below 2.5	0-8 AP	849 63%	85 69%
	10-18 AP	68 65%	33 73%
	20+ AP	45 89%	56 84%
Between 2.5 and 2.69	0-8 AP	203 87%	31 84%
	10-18 AP	23 83%	11 91%
	20+ AP	13 92%	19 95%
Between 2.7 and 2.99	0-8 AP	290 88%	59 92%
	10-18 AP	39 90%	29 97%
	20+ AP	32 84%	63 92%
Between 3.0 and 4.0	0-8 AP	1,117 92%	445 94%
	10-18 AP	220 95%	254 94%
	20+ AP	263 96%	937 96%

The comparative size of student population and first-year retention outcomes are shown here by the following measures:

- (1) Range of first-term GPA at UCR
- (2) Number of AP/IB credits earned
- (3) Whether math or writing placement was in the lowest group or else not available



How might we improve retention?

Below are possible strategies, compiled from the UCR Graduation Rate Taskforce Report, GIA report on Enrollment and Persistence, AAAS report on Future of Undergraduate Education, some recent articles in the academic literature, and our knowledge of best practices from around the country; and overlaying this information with the preceding assessments of our own data.

Academic Challenges: How might we avoid them and better support students who experience them?

1. Create summer programs focused on first-year success

- a. Re-initiate the online version of HESA, targeted at high risk/benefit students
 - b. Restructure orientation as a launching pad for fall quarter
2. Examine alignment of ARC services with student needs
 - a. Better integrate services with courses (e.g., group tutoring, referrals, report backs)
 - b. Explore use of co-requisites instead of remedial coursework (e.g. ARC 35)
 - c. Expand use of adaptive learning tools
 - d. Ensure availability and promote utilization of the most effective services (e.g. SI, LC)
 - e. Award credit for extensive engagement with these services
3. Redesign gateway courses for student success
 - a. Assign most effective instructors
 - b. Assess alignment of course content with current high school realities
 - c. Implement best pedagogical practices for learning engagement (i.e. RIDLE)
 - d. Re-envision the TA role to emphasize personalized learning support and guidance

Wellness Challenges: How might we better support students who are at risk of experiencing acute health, family, and financial problems?

1. Train campus stakeholders in early intervention, prevention, and crisis response
 - a. Encourage adoption of healthy pedagogy approaches in the classroom
2. Improve awareness and availability of emergency financial aid
 - a. Collaborate with Res Life, including to improve financial literacy more generally

Transferring: How might we increase the perceived value of persisting at UCR?

1. Expand seat availability in bottleneck courses
2. Communicate clear paths to graduation and careers
 - a. Engage Career Services meaningfully from day one
 - i. Collaborate with Res Life, employer partners
 - ii. Better connect undergrad research opportunities to employment
 - b. Encourage all students to use and update a multi-year course plan
 - c. Simplify student course choices
3. Increase capacity and capability of academic advisors to engage in high-quality holistic advising
 - a. Reduce transactional work (e.g. articulation specialists, CRM, expanded PAA program)
 - b. Develop professionalization resources and train for holistic advising
 - c. Enhance first-year and transition advising

Priority Strategies

Of these eight recommended strategies, four stand out for their potential impacts on retention: revising our summer programs for incoming students; examining the alignment of ARC services with student needs and promoting greater utilization of services; redesigning gateway courses for student success; and expanding our advising capacity and capabilities. We elaborate on each of these below.

Summer Bridge and Orientation

Re-initiate the Online Version of HESA

Summer Bridge Programs can ease the transition to college and support postsecondary success by providing students with the academic skills and social resources needed to succeed. In 2015, Undergraduate Education redesigned the UCR Summer Bridge program into what is now the [Highlander Early Start Academy \(HESA\)](#). HESA is currently a seven-week in person summer program for incoming students that place into preparatory English or math because their scores on the University’s writing and math placement examinations indicate they are underprepared for college level English or math coursework. As part of HESA, students complete a preparatory English or math course, a secondary course (oral communication) and a 1-unit college success course (earning up to 10 units over the summer). They also participate in community building activities led by peer mentors. HESA participants are eligible for quarterly scholarships throughout their first year if they meet GPA and unit criteria.¹

The HESA program has demonstrated success at bolstering academic performance and retention. The first rigorous evaluation (summer 2016) shows that HESA participants had higher retention rates than incoming freshmen who took similar courses in the fall; and HESA scholarship recipients earned significantly higher course grades than this comparison group.

One-Year Retention and Cumulative GPAs for HESA Participants and Comparison Groups

	One Year Retention	Cumulative GPA (through Spring 2017)
Freshmen in Same Courses in fall 2016	86.8% (2,150)	2.77 (1,867)
All HESA	91.8% (134)	2.68 (123)
Applied but did not Participate	85.4% (198)	2.67 (169)
All HESA	91.8% (134)	2.68 (123)
HESA Scholarship	91.1% (90)	2.81 (82)
HESA No Scholarships	93.2% (44)	2.43 (41)

More recent descriptive analyses from the ARC (summer 2021) show that HESA scholarship recipients continue to out-perform all freshmen, with first-year retention rates of 94% (vs 87% for all freshmen), cumulative GPA of 3.24 (vs 2.96), and 48 units earned (vs 41).

In recent years, HESA completion numbers have varied widely, with an uptick in summer 2020 and summer 2021 when HESA was offered online due to COVID-19 restrictions, followed by a steep drop over the past two summers: (2019: 150); (2020: 178); (2021: 217); (2022: 85); (2023: 91). Accompanying this enrollment drop is a newer trend—students reporting that the HESA course schedule conflicts with their

¹ All participants receive \$500 for the summer and are eligible for an additional \$250 if they earn a GPA of 2.5 or higher in the summer. HESA participants are also eligible for quarterly \$250 scholarships throughout the academic year if they maintained a GPA of 2.5 or higher and completed 15 units each quarter.

summer work schedules. More recent cohorts may also harbor new expectations for online course availability, particular during the summer months.

Including an online option for HESA, especially one designed for the highest risk/benefit students, could result in larger enrollment in the program and increased student persistence. Yet a foundational component of “summer bridge” programs is the community building (low/high ropes course, peer mentoring, exam prep events, etc.). Online HESA would need to include virtual community building activities that build from our summer 2020 and 2021 programming. Including online UWP classes is both an opportunity and a challenge because the Writing Program has not been supportive of doing so in recent years. The timing of students taking placement exams and the subsequent timing of grading/scoring may continue to have implications for enrollment. If the ARC were to deliver both in-person and an online HESA program, this would likely require additional programmatic support.

Short Term: Create a Pre-Orientation Online Module for 2024

First-year Orientation is a foundational part of student transition—crucial for bolstering student retention, persistence, and completion as well as closing equity gaps. The 2022 Highlander Orientation External Review found that ***our current Orientation model is dated, not keeping up with the innovation level at UCR.*** Learning from the past to build a new and innovative Orientation model was a common theme expressed to external reviewers from the National Orientation Directors Association (NODA). Potential action steps:

The External Review reports that many incoming UCR students are overwhelmed by the pre-Orientation process because multiple departments are reaching out to them and UCR messaging is not consistent. Thus, UE Student Success, Student Affairs, XCITE and 3 lead advisors are now developing a campus-wide orientation/advising platform and online modules. We hope this initial collaboration will create momentum for more ambitious long-term efforts at Orientation reform.

Long Term: VCSA/VPDUE co-chair Orientation Reform Advisory Group

The college associate deans and SAMs are looking for a big-picture plan for Orientation that more clearly prioritizes what’s best for our students and their families. They feel the existing Orientation Working Group is not focused on developing a vision for improving Orientation. Stakeholders aren’t currently engaged in ongoing discussion regarding what an effective *collaborative* Orientation – the current standard at peer institutions – looks like and achieves. Long term planning toward a more ideal Orientation grounded in a clear vision for our students might build from a few guiding questions:

1. What is the vision/mission for the first-year Orientation program at UCR?
2. How can Student Affairs/UE/SAMs partner more effectively toward fulfilling the goals we share in common on behalf of our students?
3. How are peer competitor institutions delivering Orientation post-COVID?
4. What are the benefits/drawbacks of a Welcome Week model of Orientation scheduled closer to the start of the school year?
5. How can Orientation best support our student success goals?

Examine alignment of ARC services with student needs

Over the past decade, research has shown that two of the strongest academic support programs on the UC Riverside campus are Supplemental Instruction (SI) and the Learning Communities (LC). Supplemental Instruction is UCR's largest student academic support program, affecting ~5,500 students per year primarily across CNAS, BCOE and CHASS. SI-supported LC's have proven to increase student persistence, GPAs, and graduation rates, and hold promise for narrowing equity gaps—a significant campus priority. Further improvements may be possible with respect to expanding SI support to include more non-STEM courses and addressing funding instability amid dramatic ASE cost increases. Yet in recent years, the number of SI sections (and SI student leaders) has declined, per the following table.

Supplemental Instruction: SI Sections and SI Leaders by College/School*

YEAR	# SI Sections Winter			Combined # SI Sections (Schools) Winter	Total # SI Sections (row total)	# of SI Leaders (AY)
	CNAS	BCOE	CHASS	Business/SPP/SOE		
2018- 2019	155 (14) (56)	12 (9)	16	2	185	85
2019- 2020	111 (15) (56)	(10)	13	0	134	67
2020- 2021	72 (7) (55)	(11)	4	0	87	78
2021- 2022	71 (15) (46)	(15)	5	0	91	63
2022- 2023	56 (3) (34)	7 (4)	5	2	70	41
2023- 2024	53 (23)	4	7	0	64	60

* Winter quarter. The numbers in black are the total number of sections. The gold parentheses are the BCOE LC sections and the blue parentheses are the CNAS LC sections with SI Leaders.

Delivering SI sections is costly. The program is coordinated by 2 full-time staff members who are responsible for recruiting, hiring, training, and supervising SI student leaders. Due to the strike that occurred in fall 2022, the cost to support SI leaders increased significantly, contributing to the downward trend in the number of SI sections offered. To reverse this trend, the ARC could pursue alternative models that align with the structure of SI at other institutions, such as:

1. Assess a fee to the learning community programs for the learning community sessions
2. Assess a fee to all requests for SI sessions that are outside of the ARC's standard offerings
3. Make all SI sessions "open" (available to all students within a given course rather than limited to specific LC blocks) and have the learning community programs direct students to attend.

Redesign entry-level and gateway courses

Well-designed and well-taught gateway courses are a critical factor for improving student retention rates. Gateway courses tend to have higher DFW (unproductive credit hour) rates than non-gateway courses,

as well as related challenges with long waitlists, room availability, room capacity, and student scheduling. The term “bottleneck course” is often used to express how gateway courses can effectively act as a structural barrier to student progression and significantly impact student graduation rates over time. Furthermore, a strategic approach to redesigning gateway courses can use best practices and evidence-based strategies to promote persistence and the academic success of underrepresented students. The goal for gateway courses should be that they become exemplars for creating inclusive and equitable learning environments for all our students.

Short Term: Continue the RIDLE Faculty Learning Communities focused on Gateway Courses

In 2022, XCITE launched the [RIDLE](#) (Rethinking Instructional Design for Learning Engagement) Faculty Learning Communities. Utilizing a Community of Inquiry (CoI) model and the Design Thinking process, RIDLE is a faculty-led, XCITE-facilitated, faculty development and course redesign effort. In 2023, 60 faculty members from 60 gateway courses participated to redesign and improve their “bottleneck” courses. RIDLE approaches course redesign from four different pedagogical lenses based on the identified issues in any particular course, so that the improvements match the issues that are present in that course context. The four lenses are: 1) changing the course modality to hybrid or online; 2) adding more active learning to the course; 3) exploring needed technological tools to enhance student engagement; 4) focusing on creating a more inclusive learning environment.

RIDLE offers stipends to the faculty to participate in the program which lasts 9 months. The faculty members work closely with XCITE’s Instructional Design and Faculty Development Staff, with additional support from XCITE Studios, Teaching and Learning Initiatives, and outside experts on pedagogy and instructional innovation. As a part of RIDLE, faculty are provided tools to assess the quality of their course redesigns using the evidence-based Quality Matters rubric, which helps ensure that the redesigned course has verifiable improvements. RIDLE also trains faculty members on how to use UCR’s course data dashboard to track their improvements in closing equity gaps and reducing their DFW rates over time. Total costs are around \$10,000 per course.

Short Term: Additional Inclusive Teaching Initiatives for Gateway courses

As part of UCR’s membership in the [Student Experience Project](#), faculty have access to several tools and resource hubs to bring more inclusive and equity-minded practices into their instruction. Resource hubs include how to write a more inclusive syllabus, how to share wise feedback, and how to create more identity-safe classroom environments. Each of these toolkits come with online trainings that are available to faculty members and reinforced by regular XCITE workshops focused on these topics.

XCITE has also been heavily involved with creating a DEI rubric with other centers for teaching and learning in the UC system. The DEI rubric has been designed to help faculty members consider ways to improve equity in the classroom. XCITE provides assistance with the rubric, and it could be a valuable approach to encouraging more inclusive teaching in gateway courses.

Long Term: Campus-Wide Gateway Course Faculty Advisory Board

Working with the Faculty Senate and the Deans, this initiative would involve having regular advisory board meetings during the school year to address the specific needs of gateway courses. Ideally, each undergraduate school/college would provide 3-4 faculty representatives who teach gateway courses, to serve on this board as a way of providing leadership and continuity over existing gateway course

initiatives and review institutional data dashboards and student learning outcomes for the scaling and sustainability of these efforts. This kind of board would provide more faculty oversight and engagement towards UCR efforts in student retention.

Expand advising capacity and capabilities

The 2020 Academic Advising Program Review and recent conversations with the Advising Governance Committee (AGC) and SAMs underscore quality academic advising as a crucial professional responsibility at the heart of equitable student success. The Review and our discussions have highlighted the need to create more consistency in the advising experience at UC Riverside on behalf of the most diverse student body in the UC system.

A fundamental challenge in academic advising is advisor/student caseload. A 2011 NACADA study found that the median US case load of college advisors is ~300 students to one full-time advisor. That's a large number, but many advisor caseloads today are much higher. High student caseloads at UCR, which average more than 400 student FTE per advisor FTE, combined with the historical accretion of duties not directly related to academic advising limit the time advisors can dedicate to their mission. This creates barriers for students to create meaningful connections with their advisors, as interactions are pushed towards transactional support as opposed to developmental advising.

With limited advising resources available to support student achievement and persistence, academic advising professionals have noted flagging GPAs and increasing student withdrawal rates that threaten to exacerbate gaps in educational opportunity and degree completion. Students interviewed during the spring-to-fall retention survey mentioned above also have reported frustration with the system, including unresponsiveness or slow response times, excessively brief meetings, and superficial interactions – all of which is exacerbated by high caseloads. The same students reported turning to discussion boards to get their questions answered informally by other students.

To better support our students, UCR advisors aim to create an inclusive environment to provide holistic and developmental advising. Additionally, advisors strive to create programming, interventions, and proactive advising to enhance student support and the overall undergraduate experience. High caseloads make it challenging to accomplish this, but three efforts are already underway to expand the capacity and capability of our existing advising staff to provide these services: (a) hiring new course articulation staff in Enrollment Services; (b) building a new Slate-based CRM for student information management; and (c) investing in professional development activities.

We suggest two further efforts designed to ***elevate advisor staffing and career ladder/progression*** over the long haul and to ensure that advisors are adequate in number: 1) enrich/extend peer academic advising as a pipeline into the profession at UCR, and 2) pilot a cadre of “Academic Advocate” advising professionals who lead data-informed “care management” teams.

Peer Academic Advising

We advocate for establishing a campus-wide Peer Academic Advising (PAA) Program, modeled on the successful PAA programs in SPP and [CHASS](#), and coordinated from within the Division of Undergraduate Education, to support UCR students, staff, and our long term institutional goals. This support will positively impact retention and timely graduation and narrow equity gaps by enabling advisors with lighter transactional workloads to form more meaningful relationships with students. Accessibility to

PAA's will also provide students with greater access to academic advising services, mentorship, resources, and many opportunities that students might overlook without a connection to PAA's (who can serve as both educational and culturally relatable role models).

The campus-wide PAA program would be led by a Peer Academic Advising Coordinator within UE, and Advising Supervisors selected from each of the colleges/schools and affiliated advising units (i.e., Honors, HPAC, Athletics). The PAA Coordinator will work with the SAMs to identify the Advising Supervisors who will supervise PAA's for their respective units. Once identified, the Advising Supervisors will undergo training led by the PAA Coordinator. Together, the Coordinator and Advising Supervisors would constitute the Peer Academic Advising Workgroup. The Workgroup would start with a marketing campaign in the Winter 2024 quarter to promote the program to undergraduate students as a potential paid career development opportunity and facilitate the hiring search for PAA's.

In Spring 2024, the new cohort of undergraduate PAA's will enroll in a new 1-unit R'Course (S/NC) designed in collaboration with XCITE and with utilization of UCR Canvas modules. The PAA Coordinator will manage the course—facilitators and presenters will include members of the PAA Workgroup, academic advisors, campus resources representatives, current PAA's, and staff members from Undergraduate Education. Upon completion of this training, PAA's will transition to their home department to receive departmental training and begin their PAA work. The PAA Coordinator and the Workgroup will work in tandem to develop continual professional development training and community building opportunities for all UCR PAA's.

In addition to the reduced staff workload and student experience benefits, there is a demonstrated cost benefit to hiring PAA's to provide supplemental support to advising units as seen in the School of Public Policy (SPP). During the past five years the SPP has maintained a single academic advisor who has served in various capacities (SAM, Enrollment Manager, served on various campus committees) thanks to the support of PAA's. In the 21-22 academic year, three SPP PAA's, with a combined salary of approximately \$25,000, handled ~500 advising appointments, ~2,000 email interactions, and participated or coordinated over 20 recruitment and student focused programming events. Beyond the cost benefit, successful PAA programs at other institutions develop an organic pipeline of PAA's that remain at the institution in academic advising or higher education careers.

We envision a Peer Academic Advising Workgroup led by an Academic Advising Professional Coordinator within UE. The Workgroup will build upon advising professionals' instructional skills to teach and mentor aspiring student advisors-in-training. We envision Peer Academic Advising as a high impact practice designed to enhance all undergraduates' sense of belonging, satisfaction, persistence, timely graduation—and to narrow persistent equity gaps.

Academic Advocate Care Management Teams

The University of South Florida, a recent AAU inductee, attributes seven years of steady progress in student retention/graduation outcomes to a data-informed approach to student success and a "Care Management" model that combines predictive analytics (which will be enabled at UCR via the longer-term ITS project mentioned in the introduction) with case management principles used in health care. We propose a similar model in which at least some skilled advisors as "Academic Advocates" use early warning signals in our new CRM to quickly address a student's needs in collaboration with a care management team. Academic Advocates would be at the center of this collaborative data-informed

approach to triage and assist students with help from a care management team that links resources in UE, Student Affairs, ITS, and Institutional Research.

This would be an appropriate complement to the work we are doing at the lower end of the academic advising workload stack which relies on course articulation specialists in Enrollment Services, PAAs, and technology to help reduce the transactional burden. It would also further enhance career progression opportunities for our advising professionals: from PAA to Advising Professional (steps 1-3) to Academic Advocate to SAM, establishing more of a career pathway for advisors who master the typical responsibilities and show affinity/adeptness for troubleshooting difficult problems via collaborative care management.

We propose a 3-year pilot targeting ~20% of first-year freshmen and transfer students deemed most able to benefit from targeted outreach and collaborative care. A reduced caseload of 150 students would enable Academic Advocates within each college/school to engage the right students at the right time with meaningful support (~3 meetings/quarter) in collaboration with a care management team. This model places trustworthy advisor-student partnership at the core of a data-informed team approach to identifying students in real time for outreach to stay on track, remain in school and graduate on time.