

**Proposal to the UA Parents Association**

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Program seeking funding: College of Science Office of Student Services, Retention Program

**UA Foundation Account Number:** 01-11010.0345

**Proposal Title**

“Improvements to the College of Science Student Experience”

### **Overview of the department seeking funding**

Last year, a similar version of this proposal was submitted, but since it was denied (potentially because it was not far-reaching enough). The use of funds has been expanded to benefit all undergraduates (3,100) in The College of Science. The College of Science Office of Student Services (COSOSS) reports to the Associate Dean and participates in retention and recruitment initiatives as well as performs academic advising, the coordination of student events and management of new student orientation within the College. Retention activities in COSOSS include academic advising (with unprecedented walk-in advising availability of 38 hours per week), probation advising, presentations at orientation college meetings, coordination of a peer mentor program for incoming Freshmen, and the coordination and instruction of a mandatory course for Freshmen who go on academic probation after their first semester (STCH 195a). Continuous outcomes studies are also performed to assess changes in retention. The College would like to add personality assessment and major exploration services to its program and acquire technology to facilitate these services.

### **Abstract**

This proposal requests funds for support of to improve undergraduate retention in the College of Science (COS). Below are COS Freshman retention rates and UA Freshman retention goals:

<b>CoS retention rates</b>					<b>UA retention goals</b>
<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2010</u>
79%	82%	84%	84%	84%	85%

Already in 2004, the College of Science was very close to the university goal for Freshman retention. The STCH course was taught for the first time during that year, and there was a 2% increase in Freshman retention that same year. The course is required for approximately 75 - 100 Freshmen each year. To continue to improve retention, this class will continue, but in order to provide the quality of instruction, technological and training needs must be addressed. Additionally, technology and training will have a broader reaching impact, as we can improve advising services for all 3,000 + undergraduates in CoS. This is necessary since Freshman to Sophomore retention rates are high, but overall retention and graduation rates need improvement. The Junior to Senior retention rate in CoS was 67%, and the four-year graduation rate was 38% and 63% for the five-year graduation rate in a study of the entering class of 1998. According to Chickering, the development of one's identity is one of several challenges that students encounter during their college years (Chickering and Reisser, 1993). Part of identity is the knowledge of one's values, talents, interests, strengths, and limitations. Providing the Myers-Briggs Personality Test and the Strong Interest Inventory services to CoS students will not only help them get to know themselves, but also how to use their unique characteristics to be successful college students. Technology will also be required to administer the tests. These added services will be administered in workshops, the classroom, and on an individual basis.

### **Proposal Statement**

#### **Introduction**

Public institutions have an ethical commitment to assist academically struggling students rather than passively allowing them to fail. Institutionally, it costs less to retain a current student than allowing that student to leave and recruit another (Dennis, 1998). Retention research (Kulik, Kulik, and Shwalb as cited in Pascarella, Terenzini, 1991) identified several types of interventions that had a positive influence on student GPA and retention. These interventions included comprehensive support programs including advising and counseling, and instruction in academic skill-building, such as improving study skills, effective note taking, reading and annotating text books and college level exam preparation (see Table 1 for an abbreviated syllabus of the STCH course). The course is mandatory and worth 1 elective credit for grade. The course is taught to Freshman students admitted in the Fall semester, who go on academic probation at the end of their first semester, and as a result, are subsequently registered for the course in the Spring semester. This course is taught once per year and is far-reaching in that 180 students have completed the course and over the next 5 years, approximately 400 more will benefit from it. Additionally, the effects of the course have been even more far-reaching, in that the model of managing, teaching, and developing this course is now being used by the Department of Psychology, the College of Education, and will be implemented by the College of Agriculture and Life Sciences. Outcomes and best practices have also been shared with the campus community and these forums have inspired other Colleges and Departments to offer similar courses. This grant would also allow COSOSS to provide workshops and assessments for all of its 3,000 undergraduate students.

**Table 1 (Class Meeting Topics)**

<ul style="list-style-type: none"> <li>•Class Introduction, Review of Syllabus</li> <li>•Academic standing and UA policy</li> <li>•Meet with your advisor</li> <li>•Understanding Personal Strengths &amp; Limitations</li> <li>•Motivation, Values, and Learning Styles</li> <li>•Time management, part 1</li> <li>•Time management, part 2</li> </ul>	<ul style="list-style-type: none"> <li>•Study Skills</li> <li>•Test-taking Skills</li> <li>•Campus Resources for Academic Success</li> <li>•Career Development, Skills, and Interests</li> <li>•Goal Setting and Decision Making</li> <li>•Team Work and Personality Types</li> <li>•Stress Management and Healthy Living</li> <li>•Closure, course evaluation</li> </ul>
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**Outcomes Assessment of the Success in Science Course (STCH)**

The benefits of this course have been significant. Course evaluations and retention studies have shown positive results. The course evaluations were high in all measured areas including those that assessed instructors' performance. Tracking the retention of these students showed extraordinary improvements when compared to a control group that never took the course. Desired outcomes have proven to be very positive.

**Course Evaluations**

Using a 5 point Likert scale (1 meaning "completely disagree" to 5 meaning "completely agree"), students submitted agreement ratings on 11 statements that were designed to measure satisfaction with both the course and the instructor. The overall scores were impressive. Every statement scored greater than 4.2 on the scale and some highlights of interest are:

The mean score for "My instructor cared about my success in this class and other classes" was 4.81 and for "It was worth my while to take this course," the mean score was 4.32. Students also provided a mean score of 4.4 for "The course activities were relevant and useful." Additionally, students cited the Myers-Briggs Personality Test as one of the top three most useful and enjoyable activities in the class, because it was "hands-on and interactive, [and] fun and interesting to [discover] more about myself" (2005/2006 course evaluations).

**Fewer students were disqualified/dismissed and many returned to good academic standing within one semester.**

Within the 2005 cohort, 46% of the Freshmen who completed the STCH class got off probation after one semester; within the 2004 cohort, 56% got off probation after just one semester. Compare this to only 4% and 12% of the 2003 and 2002 cohorts respectively who did not take the STCH course. Out of the 2004 and 2005 cohorts only 31% and 33% were eligible for dismissal/disqualification (DQ) respectively. Fewer disqualified students results in less attrition and consequently increased retention. The 2002 and 2003 cohorts saw much higher dismissal rates at 55% and 71% respectively.

**Retention improved for Students who took the STCH course.**

The 2004 and 2005 cohorts were eligible to enroll for the Fall semester--69% and 64% respectively. In contrast, only 43% and 26% were eligible to enroll in 2002 and 2003 respectively. The students who were not eligible to enroll had been dismissed per university policy. The percentages actually retained were drastically higher for the 2004/2005 cohorts than their 2002/2003 counterparts. 50% and 53% of the 2004 and 2005 cohorts were retained respectively, while the 2002 and 2003 cohorts only retained 21% and 20% respectively. These numbers were gathered on the 21<sup>st</sup> day census date of the Fall semester of the students' sophomore year, which is the official day used to measure retention. Retention more than doubled for the groups that completed the STCH class.

**Budget**

One laptop computer:	\$1,750
One PowerPoint projector*:	(\$2,500)
Stipend for four instructors*:	(4,000)
Funds for four advisors to receive the following training:	
Two advisors - \$600 each for the online Strong Interest Inventory Course =	\$1,200
Two advisors - \$750 tuition each for five-day Myers Briggs Personality Test training course =	\$1,500
Two advisors - \$750 each hotel fees and per diem to take Myers Briggs course which is only	

offered in Phoenix =

\$1,400

**Total amount requested:\***

**\$5,850**

\* The projector and instructor stipends will be paid for by College of Science Administration

### **Budget Justification**

As resources have decreased across campus, instructors are unable to rely on guest speakers to come to the class as they have in the past. Guest speakers facilitated the Myers-Briggs personality test and interpreted results, which was a very popular and useful activity for the students. The test helped students identify strengths and limitations, and students learned how to use that knowledge to engage in effective and successful interactions with professors, fellow students, and potential employers. I am requesting training funds for two of the five instructors who would provide the Myers Briggs instruction for all five sections offered. Professional certification is required to teach this. It is imperative that CoS train two instructors, as no instructors from other units will be available to provide this service to students in CoS from this point forward.

Additionally, I want to add the Strong Interest Inventory to the curriculum, which is another useful student-assessment tool that measures and connects students' interests with their talents/abilities. Students use this information to make decisions on career choices and majors. This service was offered by University College for a fee of \$15 per student, but we do not want to force these students to do a fee-based activity. The College of Science would like to offer success workshops, Strong Interest Inventory and the Myers-Briggs Personality Test services to all of its undergraduate population. These services would be free to students and highly promoted to help improve retention by targeting the entire population rather than just those who are on academic probation.

I am requesting training/certification funds for two instructors who would provide Strong Interest Inventory interpretation of results for all five sections offered. Additionally, one of the instructors who would receive training/certification also advises undecided students in the College of Science and would provide this service to them as well. Again, professional certification is required to interpret and present Strong Interest Inventory results. The Strong Interest Inventory would also be available to take on a laptop computer, and instructors would be available to interpret results and consult with the student participants.

The group presentation was also listed in the top three most useful activities, since students expressed positive feelings about learning more about student resources on campus. The students conducted their presentations via a laptop computer using PowerPoint and a projector. The laptop has since broken and is irreparable. The requested laptop would be used for future presentations as well as be set up in the COSOSS as a "student lab" to complete the Strong Interest Inventory, the Myers-Briggs Personality Test and be available to all undergraduate students in the College of Science who need quick and immediate access to use online tools. Additionally, the projector would be used for workshop presentations for undergraduate students and peer mentors. COSOSS borrows a projector from the Business Office, but would like to have its own. The Business Office has agreed to purchase one for COSOSS.

### **Continuous longitudinal research will assess desired outcomes**

Along with continued short-term assessment, a longitudinal study is being conducted to assess retention from sophomore to junior status, from junior to senior status, and ultimately, 4-year, 5-year, and 6-year graduation rates. The 2002/2003 freshmen on academic probation will constitute one control group (no STCH) and the 2004/2005 freshmen on academic probation who completed STCH will constitute the treatment group, in which the STCH experience is the experimental intervention. If retention and graduation rates improve significantly over the course of time, the STCH class will continue and possibly expand to accommodate more students if resources can be located to teach it. Additionally, the expanded services for all students will be tracked and analyzed for retention purposes. Each student who participates in these services will be tracked over time to identify retention and graduation rates. As of March 2008, there are significant, positive results pending publication.

### **Summary**

Short-term outcomes reveal the success of the STCH course in serving students and increasing retention. The instructors are dedicated, and the coordinator of the course is committed to continuing this successful component of the college's retention plan. Longitudinal studies will evaluate whether or not the course improves retention and graduation rates over a four- to five-year period. With a minimal investment, the course would be greatly improved. Reliable technology would allow students to use PowerPoint and learn how to become effective presenters. Additionally, the laptop would be used for broader student services as a "mini computer lab" in the

Office of Student Services. Training of instructors would insure that important topics are a part of the curriculum without relying on external resources who can no longer commit their time outside their own units. Training in the area of the Strong Interest Inventory would also benefit the undecided students in the college. Both the technology improvements and the training of instructors would augment the quality of the course. Additionally, the new services and resources would be promoted to all students in the College of Science, since these services are fee-based at University College. I hypothesize that these added and expanded services will contribute to the improvement of retention and graduation rates for all undergraduates in CoS.