

# Administration

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This document describes my vision of the role of the College, sketches my academic career, and defines my administrative philosophy. The accompanying document discusses some of the broader issues of teaching, research, and service and in particular the role that technology plays in these endeavors. Please read this before reading the document entitled, “Teaching, Research, and Service.”

**Arts and Sciences.** The liberal arts form the core set of values of any school. Thus the College of Arts and Sciences is the soul of the institution. Our role is not to teach a specific set of facts, but rather to teach students how to synthesize facts into a coherent world view and thereby to teach them how to think. It is an arduous task. This goal is facilitated by a Dean who recognizes the strengths of the faculty, who uses these strengths to develop and to formulate the goals of the College, and who does not lose sight of the objectives of a liberal arts education.

The faculty are the College’s most important resource. Faculty who are committed to fundamental research and to the virtues of teaching are best equipped to teach students how to learn. An impassioned teacher questions assumptions about pedagogy, examines best practices, and brings the current state of knowledge to the students. An engaged researcher recognizes (among other things) that teaching a freshman service course re-focuses research intent and that one’s own research can help develop students’ understanding in the same course. Just yesterday I was discussing with my students the fundamentals of an iterated product rule in calculus. As I was explaining this through gestures, I realized that I was also describing the nature of a family of formulas in recent research papers that I had written. The thought was not so profound: the formulas in the research papers were

motivated by ideas from calculus. Yet the joy that the thought provoked is worth sharing here. My experience was not unique.

The Dean must inspire and reward the faculty so that they can achieve their goals. University faculty are independent thinkers. Faculty have many voices and many ideas; they are successful people, and they are reliable and thoughtful. Although each discipline has its own culture and each researcher has his or her own priorities, the Dean should assist the faculty to develop consensus and foster their feeling of pride for the institution. The Dean should lead, but not dictate. The Dean should facilitate and promote excellence in scholarship, excellence in research, excellence in teaching, and excellence on the part of the students.

The College's educational goal is to ignite students' interests. In this way students will learn to be thinkers. Learning how to learn is a complex endeavor. It involves learning by repetition to improve brain strength, and just as importantly, it involves addressing unanswered and unanswerable questions to develop higher cognition. As I explain to my students, my desire is for them to build all of short-term, medium-term, and long-term memory. Their long-term memories of content knowledge are the building blocks that they will use to synthesize knowledge in different contexts.

I would like to say that our students are our most valuable asset, but this is not true. Rather it is an educated graduate who has learned that she will continue to pursue knowledge for knowledge's sake. She will be the future innovator, the future poet, the future scientist, and the future humanitarian. Our College will not be measured by the amount of information that our students can reiterate, but it will be judged by how well they succeed in their future endeavors. The role of the College is to produce students who enjoy thinking. Meanwhile, the College of Arts and Sciences is the economic engine of the University. It is so by virtue of the service role it provides to the professional schools. We are expected to teach students to read, write, and to be educated in arts, languages, sciences, mathematics, and the humanities.

Core courses in Arts and Sciences form the backbone of a college education. Make no mistake, the health sciences and the world of business are dominated by humanism. Physics and mathematics are the underpinnings of engineering, chemistry and biology the scientific underpinnings of the medical sciences, and business acumen is informed by psychological and sociological considerations. International relations are dysfunctional without the cultural understanding that comes from having studied art, history, and a foreign language. The College of Arts and Sciences is central to the entire University's mission. It needs strong leadership that advocates for a liberal arts education.

**Career Synopsis.** I completed my Yale University Ph.D. in mathematics in 1982. My dissertation straddled two areas of topology: one highly developed algebraic component and one *ad hoc* geometric component. My first job was a three-year postdoctoral appointment at the University of Texas at Austin. There I honed a battery of geometric techniques and learned my craft. In the middle to late eighties, tenure track positions at top schools in mathematics were few and far between. It took until 1989 to find a suitable tenure track appointment in a department in which there were faculty with complementary research ideas. The Department of Mathematics and Statistics at the University of South Alabama boasts research productivity that is (according to standard measures) comparable to any mathematics department in the region.

I have served as department chair at USA since January 2003. During my tenure as chair, we rebuilt the department to a size of 27 full-time faculty after having seen a diaspora. The department has succeeded in securing NSF grants for eight faculty members. An additional eight faculty members are employed at the non-tenure accruing instructor level and they have no research expectations. We have continued a successful Mathematics Circle outreach program. Our faculty have been invited to give plenary lectures at international conferences, colloquia, and seminars in a number of highly prestigious schools. We routinely collaborate with faculty at top tier institutions. The achievements of this dedicated group of scholars and teachers reflect positively upon my leadership. I am proud to be chair of such world-renowned scholars.

As a scientist, I have authored or co-authored four books, with another completed book manuscript under review, and over 55 research papers. The venues for these papers include many of the highest level journals in my field. I also view my research duty to include expository works. Since much of what I do involves the study of knottings in 4-dimensional space, I have spent some time developing unpublished work that demonstrates how to visualize standard pieces of 4-dimensional space including artistic sketches that I created with the Adobe Illustrator software. These have been shown in math/art venues.

**Administrative Philosophy.** I would be disingenuous if were to say anything other than I view the Dean as the principal advocate for the faculty to the higher administration. As Dean, I will crow about faculty achievement. Faculty know the sweat and joy that go into research publication. They know the pleasure that is earned when students succeed. They need affirmation and recognition when they give inspiring lectures, when they

engage students in cooperative learning, and when they deliver papers at prestigious venues. The Dean's role is to facilitate, to address the needs of students and faculty, to guide students towards greater achievement, and to foster and promote the ideas of fundamental research and outstanding teaching.

Faculty engage in research for three reasons, at least. Most importantly, we are curious and we find doing research to be fun. Second, it further advances our careers. Third, by understanding basic human knowledge at the forefronts, we are better able to explain the fundamentals of human thought to our students. The Dean's role is to promote the disciplines and thereby further education.

Any administrator must allocate resources fairly to make sure that faculty achieve their research and teaching goals. While the Senior VPAA has to set financial priorities for the institution, the College wants to secure its fair share and works with Academic Affairs to state its case politely, yet firmly. In case the College does not succeed in obtaining everything that it wants, then the Dean has to be able to explain to the faculty through the chairs the VPAA's decision. Ideally, communication among the various governors is through the chain of command. This is not a matter of insulating those at the top, but it is a matter of developing efficient communication channels. It is also a matter of common courtesy and respect for others.

The Dean is a public representative for the College. My goals include outreach and funds development. Some items are ripe for endowed funds. Additional endowed public lectures, such as the Stallworth and Mahan lectures, across a variety of disciplines can help promote public understanding of our mission. These lecture series help bring important scholars and collaborators to the University. Similarly, named concerts, art exhibitions, and theatre productions create not only a great public image, but also enrich the life of the community. The Dean has the difficult task in explaining to potential benefactors the nature of research in education. The Dean has to be aware of these sound-bite needs, and have an elevator speech at hand to explain to a potential donor why establishing an endowed chair in Philosophy, for example, will benefit the community at large.