

College of Arts and Sciences

Strategic Plan

March 2004

Introduction

The College of Arts and Sciences is a key provider and innovator for the education of virtually all Drexel students at various points in their careers. The College's undergraduate majors take advantage of strong curricula that exhibit interdisciplinarity, flexibility, faculty mentoring, and opportunities for research. Co-op and internships, study-abroad programs, and research-based learning provide them with excellent opportunities to enter the workplace immediately or to proceed to post-graduate education. The College's undergraduate programs produce highly marketable professionals and realize high student placement rates. The College's graduate students similarly have opportunities to study in strong academic programs and perform research with productive, globally-recognized faculty advisors that often participate in broad collaborative research. Beyond majors, the College provides a broad array of high quality foundational and upper level courses to virtually every undergraduate student at Drexel. Several College faculty are becoming involved in Drexel e-Learning initiatives.

Research in the College is strong, multi-disciplinary, and growing. There is a major focus in the life sciences that is consistent with the merger with the Colleges of Medicine, Public Health, and Nursing. Research in the sciences spans diverse fundamental and applied areas and includes established strengths in Astrophysics, Biophysics, Nanoscience and Nanomaterials, Particle Physics, Polymer Chemistry, and Environmental Science and Policy. Research in the Humanities and Social Sciences is also growing, emphasizing a unique Drexel-inspired technological perspective with numerous interactions within and outside the College. Such research activities link science, policy, theory, and practice in local and international community building that brings increasing visibility to the College and the University.

Many College faculty significantly contribute to the operation of the College and University in administration, committees, and governance.

Historical Perspective – Evolution to a College of Arts and Sciences

The importance of "Arts" and "Sciences" has been stressed since Drexel's founding in 1891 as the *Drexel Institute of Art, Science and Industry*, with continual redefinition as times have changed; the institution became *Drexel Institute of Technology* in 1936 and *Drexel University* in 1970. Drexel's seal is an equilateral triangle, with Science and Industry as the sides, and Art as the base. The medallions on the entrance to Main

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Building include great men of extraordinary accomplishments in the arts and in the sciences. The origins of the programs represented by the College today can be traced to initiatives that recognized their importance in earlier times; a few key events are noted below. The continued relevance of the programs resulted in growth and recognition, and now the College assumes a central role in the University.

- The Business Department was apparently the first to offer English at the original Institute and other Departments followed. In 1914, the faculty of the School of Engineering consisted of eight full professors – one each for civil engineering, English, design, mathematics, chemistry, physical training, mechanical engineering, and architecture.
- In 1954 the College of Business offered a core of general studies: mathematics, English, history, language *or* science, psychology, economics, sociology and political science.
- In 1965, a Humanities and Technology Program was created as an honors program for students to enter after their first year. The Division of Humanities and Social Sciences, was created in 1967 and the College of Science was created in 1968. The College of Humanities and Social Sciences was created in 1970. Robert G. Hallwachs, first Dean of the College, in his presentation to the Board of Trustees, said, “Inasmuch as the special character of Drexel University is its emphasis on the applied arts and sciences, it is appropriate that the proposed College of Humanities and Social Sciences should provide the historical, theoretical and practical basis to equip students to deal with the current and future problems of man and society.... The potential of a technological university, as indeed of a technological world, requires that the work of science and its applications, must be more closely linked to the study of Man. The programs of the proposed college will be designed to accomplish this end.”
- In 1990, in the midst of a downturn in enrollments and fiscal shortfalls, the College of Science and the College of Humanities and Social Sciences were merged into the College of Arts and Sciences.
- With the merger of Drexel and MCP/Hahnemann in 2002, the Department of Psychology, Sociology and Anthropology and the Department of Humanities and Communications were reorganized to create the Department of Psychology, the Department of Culture and Communication, and the Department of English and Philosophy. In addition, Computer Science was separated from the Department of Mathematics and Computer Science and moved to the College of Engineering, and the School of Education was separated from the College of Arts and Sciences.

The University theme of “Arts and Sciences” has been maintained since Drexel’s inception. The College of Arts and Sciences assumes the charge to infuse this unifying theme throughout the University. However, there still remains a somewhat artificial separation between the arts and the sciences in the University – this is realized administratively, in census statistics, and often in perception both inside and outside the College. Perhaps this has come from the lack of recognition of a clear College mission by upper level administration and, perhaps, by members of the College as well. A

separation of arts and sciences, real or artificial, is not consistent with the 21st century times nor with the intent of the College or of the University Strategic Plan. It is time to define and assert the mission of the College throughout the University and to follow the mission by a realistic and accepted plan and by action based on this plan. Further, since all quarters of the University recognize a need for a multifaceted foundation to succeed and lead as a professional, the successful implementation of this plan will build not only the College but also the University.

The previous five-year strategic plan for the University was one of growth and achieving financial stability, which resulted in many shifts and changes within the College and the University. The theme of the new University strategic plan is “transforming opportunity” – assessing and strengthening current programs, finding synergies, and increasing visibility of the College to the world. In order for the University to accomplish these goals, the College must be vibrant, focused, and visible.

Mission Statement

By pursuing excellence in research and scholarship, we educate our students to become ethical professionals and citizens with knowledge of and appreciation for the fundamental interactions among the humanities and the sciences in a fast-changing, challenging, and diverse world.

Vision

The vision of an evolving College recognizes the history of the University and the steps that were taken to form the College. We assert that the College is comprised of a diverse and talented faculty, a host of programs that exemplify intellectual excellence, a breadth of scientific inquiry in both research and teaching, a humanistic, liberal education with a unique focus to the underpinning of Drexel’s technological foundation, and a large number of interested and talented students at both the graduate and undergraduate level.

The vision of the College is best exemplified by the concept of an integration of *the Arts and the Sciences*. While this might be similar to the view of a liberal arts college, the distinction for the College is the development of a “small college” atmosphere for majors in the context of infusing the technological fabric and experiential themes of Drexel throughout the curriculum. Students in the Humanities and Social Sciences benefit from a general science perspective of the world in which they are immersed. Similarly, students in the Sciences grow as they obtain a historical perspective of technology, the social context of their field, and a view of the ethical demands in their professional lives. While these goals are directed towards College of Arts and Sciences majors, the underlying principles need to be imparted to all Drexel students.

Structure

Dr. Donna M. Murasko was named Dean of the College in June 2003. Her goals for the College include strengthening research, education, service, and faculty governance while reasserting the leadership of the College within the University community and beyond.

The College is made up of eight Departments and one interdisciplinary major Program that interact with one another as well as with a broad array of units in the University. The level of research and scholarship among the College's 128 faculty is impressive. In FY 2003, the College research expenditures exceeded \$4.6 M. At the Undergraduate level, the College has 15 majors (BS, BA) as well as several minor and dual-degree programs. At the Graduate level, the College has 7 Ph.D. programs and 12 MS programs. The College's level of involvement in teaching across the University is exhibited by the fact that the College teaches approximately 35% of the total student credit hours of the University each year.

The *Department of Bioscience and Biotechnology* has 18 tenured/tenure-track faculty with several auxiliary and research faculty. The faculty of the Department provide expertise in five interdisciplinary divisions including Molecular and Cell Biology, Genetics and Biochemistry; Organismal Physiology and Development; Ecology and Environmental Science; Microbial Pathogenesis, Immunology, and Infectious Diseases; and Nutrition, Food Science and Food Safety. Bioscience, biotechnology, and life sciences at the University are in the process of rapid expansion in teaching and research, driven by a revolution in biology related to emerging fields such as molecular medicine systems in biology, nanotechnology, genetic therapy, nutraceuticals, neuroscience, and virology. This expansion is reflected in increased interactions between the Department and the Department of Physics and with the College of Medicine, the College of Engineering, the School of Biomedical Engineering, and the School of Public Health. Training of undergraduate and graduate students emphasizes experiences in cutting edge research technologies and interactions with senior scientists who serve as instructors and mentors.

The *Department of Chemistry* has 14 tenured/tenure-track faculty with several auxiliary faculty and postdoctoral fellows. Research areas include analytical chemistry, atmospheric chemistry, biophysical and bioinorganic chemistry, chemistry education, chemistry of nanomaterials, computational chemistry, inorganic chemistry, organic chemistry, physical chemistry and polymer chemistry. Undergraduate and graduate chemistry majors receive a heavily lab-oriented program of study, and research opportunities are stressed at both the graduate and undergraduate levels.

The *Department of Culture and Communication* has 19 tenured/tenure-track faculty and several auxiliary faculty with expertise in Anthropology, Communication, Criminal Justice, Environmental Policy, Modern Languages, and Sociology. The faculty in these disciplines are united by a strong commitment to social science research, which is imparted to the College's students as well. The very diversity of the Department is its strength. Students majoring in each

discipline are exposed to the perspectives of other disciplines. The faculty complement each other's strengths as they work on research collaboratively with one other and with extra-departmental units such as the College of Engineering, the College of Medicine, and the School of Public Health.

The *Department of English and Philosophy* has a full-time faculty of 30 (14 tenure-track/tenured and 16 auxiliary). Faculty members are committed to integrating teaching and research in their various areas of expertise, particularly world literature, composition pedagogy, writing, ethics, and applied philosophy. Many of them also contribute to the International Area Studies Program and the Pennoni Honors College. Offering both a major and a minor in English and a minor in Philosophy, the Department also administers the Freshman Writing Program and the Drexel Writing Center. The Department energized its curricula with a newly revised English major, unique to Drexel, which emphasizes the connections of literature with science and technology. The Department also provides a series of courses in literature and philosophy for all Drexel undergraduates.

The *Department of History and Politics* has 15 tenured/tenure-track faculty and 4 auxiliary faculty. Many faculty are contributors to the International Area Studies program and to the Pennoni Honors College colloquia. The Department faculty combine research and teaching in both an innovative and growing graduate program and a solid undergraduate curriculum. The Department's graduate program in Science, Technology, and Society provides a focus for research. Many of the faculty are prolific scholars with synergistic connections to engineering, health, environmental policy, and global studies. The undergraduate program provides key courses for Drexel programs in the Colleges of Engineering and Business and Administration as well as in the College of Arts and Sciences. The undergraduate curriculum for majors builds research and writing into coursework from the beginning and culminates in a two-term required seminar that prepares students for graduate school as well as for careers in government and business.

The *Department of Mathematics* has 13 tenured/tenure-track faculty and 9 auxiliary faculty. Following its split in 2002 from Computer Science, the Department has refocused its research and teaching activities to strengths that complement University goals – excellence in teaching, increased extramural research funding, and a graduate program emphasizing doctoral education. Primary research areas in Mathematics are Discrete Mathematics/Probabilistic Methods, Image Science, Mathematical Biology, and Statistics/Biostatistics. The faculty are actively working to meet the needs of Drexel's students for learning mathematical and statistical thinking and methodologies with an array of courses that serve a diverse student body, from majors in mathematics and other technical fields to those seeking a broader understanding of the highly technological and fast-changing world in which we live.

The *Department of Physics* has 19 tenured/tenure-track faculty with several adjunct faculty. Research areas include Biophysics, Astrophysics, Materials

Physics and Nanoscience, Particle Physics, and Computational Physics. The Department's excellence is realized by increasing funding levels and visibility. The graduate and undergraduate programs in Physics have been revised recently to focus on active areas in the field and to allow students to develop strong analytical and computational skills. The Department is also strongly involved in teaching across the University tailoring course content and pedagogical approaches to specific disciplines.

The *Department of Psychology* has 18 tenured/tenure-track and 2 auxiliary faculty members. There are three graduate programs in the Department – Ph.D. (Clinical Psychology), J.D.-Ph.D. (Law-Psychology), and MS (Clinical Psychology). The Department values undergraduate teaching and is currently working to expand its undergraduate program through the development of a BS-MS program. There are three particular areas of specialty concentration: forensic, health, and neuropsychology. These areas correspond with faculty research interests and graduate training as well as undergraduate teaching. The Department actively pursues collaboration with investigators from other departments and schools.

The *International Area Studies Program (IAS)* is a language-based, interdisciplinary major designed to prepare students for careers and leadership in the international arena and for successful navigation of multicultural environments. It combines a comprehensive liberal arts education with a specialization in the politics, history, language, literature, and culture of a selected world area. The Program's 19 faculty come from various Departments within the College. IAS encourages a practical framework for area specialization through study abroad, internships, and cooperative education. The basic goals of IAS are to recruit and enroll high caliber students (undergraduates and transfers); provide an innovative and high quality interdisciplinary curriculum; promote commitment of faculty to the IAS academic program and co-curricular activities; encourage faculty development in international/global studies; support expanded and enriched opportunities for study abroad and international cooperative education; and increase the visibility and depth of international educational experiences at Drexel.

Three interdisciplinary minor programs provide opportunities to expand student learning and faculty research. *Africana Studies* offers an interdisciplinary examination of the experiences of people of African descent in the United States, the Caribbean, and Latin America. *Judaic Studies* explores the Jewish experience through time and from a variety of standpoints. *Women's Studies* explores how gender interacts with race, class, ethnicity, age, and sexual orientation to shape human consciousness and determine the social, political, and cultural organization of society.

Strategic Priorities

Priority 1 – Develop and communicate the concept of the integration of Arts and Sciences in the context of a technological fabric and experiential theme

Implement curricular changes to better reflect and solidify the integration of humanities and the sciences in the College. While implementing these changes, the mission of the College will be reflected in all majors.

Goal 1.1. Review and modify the College curricula to reflect the integration of the arts and the sciences. Emphasize the importance of the humanities, mathematics, and the sciences so that the College’s graduates will be responsible citizens and critical thinkers capable of making informed decisions in a technological world.

- a. Explore the development of a core curriculum that reflects the mission of the College.
- b. Develop a “small college” atmosphere for majors in the College of Arts and Sciences with the distinction of infusing the technological fabric and experiential themes of Drexel in each curriculum.
- c. Enhance curricular goals by providing special programs such as Master’s Classes, Learning Communities, and enhanced mentoring and advising programs.
- d. Develop and implement strategies to communicate distinctive curricular aspects of CoAS programs to prospective students to improve student quality, increase enrollments, and enhance retention.

Goal 1.2. Broaden the College’s leadership in curriculum development and continue the commitment to teaching high quality, integrated foundation and advanced courses in pre-professional and professional programs throughout the University.

Goal 1.3. Evaluate and enhance current programs including dual-degree programs such as minors, dual majors, and BS-graduate programs that satisfy student interests and address societal needs.

Goal 1.4. Develop a Pre-law program that parallels the current Pre-health program. The program will capitalize upon the broad expertise of the faculty in the Humanities and Social Sciences who in their research often relate their studies to the science and technology of the modern world, giving graduates unique skills and perspectives on issues related to the legal profession.

Goal 1.5. Develop a partnership with the School of Education to provide programs for students to acquire teaching credentials in programs that emphasize unique strengths of the College and University.

Goal 1.6. Coordinate activities with Cooperative Education to provide a broader range of opportunities relevant to students in the College and to strengthen the coupling of experiential learning with academic programs.

Goal 1.7. Take advantage of technology for both the enhancement of current classes as well as the incorporation of online courses.

Priority 2 – Promote and increase research and scholarship within the College recognizing unique opportunities that exist across disciplines

Research and scholarship are the cornerstone for the vitality of any university. These should be embraced by all faculty recognizing that differences in levels of such activities will exist. While it is clear that scientific discoveries drive technological advances, boundaries between disciplines have been diminished and often eliminated in recent years. It is therefore essential that the College continues to recognize disciplinary integration and establishes bridges within the College and with other units throughout the University. Humanities and Social Sciences provide context for both the development and implementation of new technologies and should not only be valued but be considered as an integral component of our efforts. Vibrant and growing research programs in the college will further promote integration in the arts and sciences. The goals of substantively strengthening the level of extramural funding and scholarship will require the optimal utilization of resources, hiring in targeted programs and improvements of facilities.

Goal 2.1. Double the funding levels to the College in five years with an emphasis on participation by a wide range of faculty.

Goal 2.2. Increase the visibility of research in the Humanities and the Sciences. While the funding levels and nature of research in different College disciplines are varied, the excellence and relevance of the research needs to be transmitted to a broad range of audiences to demonstrate the vitality of the College.

Goal 2.3. Develop a research strategy for each Department and a corresponding research plan for each faculty member consistent with this strategy. This will follow review of Departmental programs recognizing current trends in disciplinary fields, extramural funding opportunities, and collaborative opportunities within and external to the University.

Goal 2.4. Target new opportunities for collaborative research particularly by participation within the new and proposed University Institutes and other University research initiatives.

Goal 2.5. Recruit an Associate Dean for Research who will facilitate development and implementation of a more focused research strategy for the College.

Goal 2.6. Assure competitive start-up funds for new faculty and adequate matching funds for capital equipment initiatives as required.

Goal 2.7. Ensure an adequate infrastructure in terms of space and equipment to foster research.

Priority 3 – Integrate graduate education more fully into the vision of the College while recognizing the unique needs and contributions of graduate students.

Graduate study is central to the mission and the intellectual vitality of the University because, as new professionals are trained by College faculty, their work advances the University's research agenda and international visibility. The College must be a major contributor to the University's mission in graduate education at the Masters and Doctoral levels. In keeping with the University's plans to achieve Carnegie Research Extensive status and to graduate 200 Ph.D. students per year, the College must increase Ph.D. production in Departments with Ph.D. programs as well as to increase the number of M.S. degrees, enrolling both full-time and part-time students.

Goal 3.1. Increase the number of full-time graduate students, and increase the number of graduating students with Ph.D. and M.S. degrees across all College graduate programs.

- a. Evaluate graduate programs to increase quality while balancing size, quality, breadth, and markets.
- b. Review graduate curricula in the context of modernization, interdisciplinarity, and more effective delivery.
- c. Establish new strategies for active and timely recruitment of high quality graduate students.
- d. Develop a stable funding strategy to allow competitive stipends for teaching assistantships and a competitive tuition remission strategy to attract the highest quality students.
- e. Increase extramural graduate student support in the form of research assistantships, scholarships, and fellowships.

Goal 3.2. Collaborate with other units throughout the University, including the College of Medicine and Drexel Research Institutes, to maximize opportunities for graduate students in the College while integrating resources and fostering stronger coupling of faculty and research programs.

Goal 3.3. Evaluate the demand and potential for extramural funding opportunities to establish new Ph.D., M.S., and dual-degree programs.

Goal 3.4. Recognize the need and desire of working professionals to obtain advanced degrees and develop part-time programs to address these needs by traditional classroom and online programs.

Goal 3.5. Focus on the development of Teaching Assistants as educators by supporting the development of new skills that can be applied to potential academic careers as well as to communication in a broader arena.

Goal 3.6. Recognize the effort of faculty as graduate research advisors and link hiring plans and faculty recruitment with growth in graduate enrollments.

Goal 3.7. Establish partnerships with the School of Education to provide programs for graduate study for K-12 teachers emphasizing science and mathematics education that would address a national need.

Priority 4 – Support, develop and retain current faculty and recruit high quality new faculty to achieve a faculty size commensurate with University growth and benchmarks

The faculty creates and maintains the intellectual life of the University and the College. The College has experienced Departmental restructurings and inadequate hiring in the face of attrition primarily due to retirements. It is essential that the College increase its momentum as it meets the challenges of a rapidly changing and growing University and College. In order to build upon the current strengths of faculty within the College, the University must commit to increasing the number of high quality faculty for the College to accomplish its mission. While emphasizing excellence in scholarship and research, it is imperative that the faculty never lose focus on quality education at all levels. Individuals need to be recruited who are committed to balancing quality scholarship with innovative and excellent teaching.

Goal 4.1. Develop a long-range hiring plan that is supported by the University administration.

- a. Determine the appropriate size for each Department based on benchmark institutions, disciplinary research activities, and forecasted teaching needs at Drexel.
- b. Identify target areas consistent with the current state of their professions, present strengths, potential research funding opportunities, and potential for synergies across the University.
- c. Recruit excellent candidates when they are identified for open positions on a rolling basis.
- d. Provide sufficient start-up funds to allow excellent new faculty to realize their full potential benefiting themselves as well as the College and University.

Goal 4.2. Recognize auxiliary faculty as an essential component of a quality educational endeavor.

- a. Develop a process to evaluate multi-year accomplishments of auxiliary faculty.
- b. Incorporate them more fully into the life of the College.
- c. Provide them with long-term commitments.

Goal 4.3. Emphasize mentorship and faculty development in teaching, research and service.

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- a. Use teaching and research portfolios for each faculty member as a means to assess and develop career objectives.
- b. Formulate objectives for new faculty upon hiring.
- c. Review and modify objectives regularly, creating positive opportunities at career junctures.
- d. Encourage and reward participation in meaningful internal and external service activities.

Goal 4.4. Continue to recognize the importance of faculty involvement in College governance. In order to implement and maintain the changes that are necessary to meet the goals of the College, faculty must be involved at all levels. The governance structure of the College, described in the by-laws, must be modified to emphasize the active role of faculty.

Priority 5 – Develop a unified and aggressive marketing strategy to highlight the successes and evolution of the College

It is essential that the vision and the success of the College are disseminated to the University community and globally. As the College embraces the integration of arts and sciences in a larger technological community, the uniqueness of this vision, its societal relevance, and the efforts in maximizing its potential should be shared with multiple constituencies.

Goal 5.1. Hire a professional to direct the marketing initiative in the College.

Goal 5.2. Develop a website that is easily accessible and responsive to the needs of the College, a College newsletter to disseminate news with the accomplishments of College faculty, and other marketing publications.

Goal 5.3. Develop support from the larger community, specifically alumni, corporations, and community leaders, that reflect both financial donations and active involvement.

Priority 6 – Develop and revitalize a support structure of staff and facilities for the educational and research activities of the College

It is essential that skilled support personnel, including office and research support staff, and adequate facilities be available to accomplish the research and teaching mission of the College. With the growth of student enrollments and research activities in a climate of limited capital budgets, facilities and research equipment needs were deferred. While recent investments have been made in this area, increased funding must be committed by the University on a continual basis to achieve the level of activity consistent with a Tier 1 University to which we aspire. The number of support staff must be increased to meet both current and projected activities in the College. These areas must be addressed to positively impact our ability to hire faculty, attract research funds, and recruit students.

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Goal 6.1. Renovate and expand research space to accommodate current and future faculty and staff.

Goal 6.2. Upgrade equipment for research and teaching to reflect a commitment to expanding research initiatives.

Goal 6.3. Equip classrooms with technology to utilize state-of-the-art practices in teaching and to be consistent with the technological image of the University and the needs of the College.

Goal 6.4. Develop a program to train current staff to meet the changing needs of the College and its Departments.

Goal 6.5. Hire new support staff to reflect increases in research activity, teaching, administration, and outreach to the community.

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