

# *Eberly College of Science*

**A Framework to Foster Diversity at Penn State:  
2004-09**

September 1, 2004

# ECOS Framework to Foster Diversity at Penn State: 2004-09

## INTRODUCTION

This document outlines the Eberly College of Science's (ECOS) strategic plan to promote diversity as an essential component of our continuing quest for greater excellence and global impact. Our intellectual strength and diversity will be paralleled and supported by our demographic diversity. To this end, we will continue and accelerate the process of transforming ourselves into a more broadly-diverse community. Accordingly, this plan recognizes that diversity and educational equity initiatives are core components of the missions of the college and of the University. In this document, we describe the diversity processes, programs, initiatives, and activities currently in place and those that we will implement to meet the goals of the *Framework to Foster Diversity at Penn State: 2004-2009*.

The Eberly College of Science recognizes diversity as a broad and multi-faceted issue. We strongly support the University's nondiscrimination policy and seek to provide an environment of mutual respect among individuals of all backgrounds and among individuals holding differing perspectives and ideas. We raise immediate public response to any incidents of intolerance; we do not tolerate episodes of racial, religious, or sexual discrimination or harassment. We value our members from different countries and cultures, and we recognize the need to have greater representation from different minority groups and to have appropriate gender balance across all constituent groups in the college. We strive to have a climate supportive and welcoming for everyone, including those of different cultures, different racial and ethnic backgrounds, those of different sexual orientation, those with different religious beliefs, those with physical disabilities, and non-traditional learners. We strive to achieve equal access to education and equal success and graduation rates for all constituent groups within our student body. We encourage students in the college to explore courses and other opportunities that promote intellectual inquiry regarding diverse ideas, peoples, and cultures.

Consistent with our vision of being a premier center of research and education in the basic sciences, and with our goal of supporting access to Penn State for those from underrepresented and underserved groups, we believe that ECOS can make a contribution to enhancing the participation and success of individuals from historically underrepresented groups in the mathematical, physical, and life sciences. For example, at the undergraduate level, we will work toward achieving the same college retention and graduation rate for minority students as for majority students. In addition, we will work toward achieving minority and female faculty and graduate student representation at least equal to the national levels of these populations in our disciplines. We will also seek to move beyond this goal to provide leadership in this area.

To achieve our goals, we must both sustain our current populations and increase our community's diversity. The best recruiting tool we have is the success of the minority and female individuals who are already here.

To support achieving these goals, we have developed, through an iterative process of working with our departments and our multicultural coordinator, a “tool box” for use by the entire college to enhance minority faculty recruitment and retention, minority graduate student recruitment, retention and graduation, and minority undergraduate student retention and graduation. (See APPENDIX I for a summary of the “tool box”.) Each department also provided to the ECOS Dean’s Office a statement of their personal goals and additional strategies for success in enhancing representation and success for diverse groups.

We will implement a comprehensive process to regularly collect and disseminate data that will measure our effectiveness in achieving our goal to further diversify our community. This will include data collection and assessment processes that will measure progress and highlight those tools and approaches which prove to be most, and least, effective. Activities with the least contribution to the overall goals of the college will be dropped so that resources can be redirected to more effective or new initiatives. A summary of these metrics and data for year zero are presented in APPENDIX II.

To aid in subsequent tracking of progress against our objectives, we have used the “Targeted Areas for Improvement” under each Challenge in the *Framework* as the organizational structure for our report.

## ***CAMPUS CLIMATE AND INTERGROUP RELATIONS***

### ***Challenge 1: Developing a Shared and Inclusive Understanding of Diversity***

- *Develop and communicate clear and consistent descriptions of Penn State’s diversity objectives and initiatives.*

The Eberly College of Science definition of diversity is as follows:

The Eberly College of Science recognizes diversity as a broad and multi-faceted issue. We strongly support the University’s nondiscrimination policy and seek to provide an environment of mutual respect among individuals of all backgrounds and among individuals holding differing perspectives and ideas. We raise immediate public response to any incidents of intolerance; we do not tolerate episodes of racial, religious, or sexual discrimination or harassment. We value our members from different countries and cultures, and we recognize the need to have greater representation from different minority groups and to have appropriate gender balance across all constituent groups in the college. We strive to have a climate supportive and welcoming for everyone, including those of different cultures, different racial and ethnic backgrounds, those of different sexual orientation, those with different religious beliefs, those with physical disabilities, and non-traditional learners. We strive to achieve equal access to education and equal success and graduation rates for all constituent groups within our student body. We encourage students in the college to explore courses and other opportunities that promote intellectual inquiry regarding diverse ideas, peoples, and cultures.

This description will be shared through dissemination of this plan, through our college web site, through sharing with the college and departmental Climate and Diversity Committees, and through direct communications with faculty, staff and students.

- *Further refine unit definitions and strategies, ensuring that constituent groups have the opportunity for input.*

We will continue to work through our college climate committees and leadership groups to develop a shared community understanding of diversity definitions and initiatives.

In addition, our college level Climate and Diversity Committee will invite leaders from a broad array of campus organizations representing underrepresented populations to come in and speak in order to inform us of the issues facing these groups at Penn State and in our college. The Committee will then develop actions items aimed at addressing the pertinent issues. Holding focus group discussions with appropriate groups of individuals may well be one outcome.

- *Develop mechanisms for assessing the degree to which unit members understand their unit's definition of diversity, strategies to achieve inclusiveness, and University diversity initiatives.*

We will include specific questions regarding our ECOS community diversity in our college-wide survey vehicle that will be administered in the 2004-2005 academic year and every other year thereafter.

We will give faculty an opportunity to report their contributions to furthering the diversity objectives of the department, college and University on their annual faculty activity reports.

We will explore conducting focus groups with some constituent groups to test the aforementioned shared understanding of the college's definition of diversity, to give the group an opportunity to shape and participate in initiatives, and to address community climate concerns.

- *Reference the unit's understanding of diversity in official communications.*

Our college's definition of diversity and our expectation for valuing diversity will be shared widely in the ECOS community through the dissemination of this plan, through web site updates, through sharing with the college and departmental climate committees, through the activities and reports of the departmental climate committees, and through yearly communications with faculty, staff, and students. The Dean also will continue to specifically highlight college diversity goals in our new faculty and student orientation programs, in the Dean's annual State-of-the-College presentations to all departments, and in meetings with our graduate and undergraduate program coordinators.

- *Form diversity committees that are well defined, proactive, sponsor a variety of programs, make appropriate policy recommendations, and use a variety of approaches to communicate within the unit. Ensure that diversity committee membership is representative of constituent units, including students and senior administration.*

We have established a college Climate and Diversity Committee on which membership is representative of constituent units, including faculty, students, staff and senior administration. Objectives for the committee are selected based on input via surveys, interviews, committee member comments, etc. Most recently, the Committee has addressed student advising,

mentoring for very junior faculty, issues relating to maternity, Martin Luther King (MLK) day activities for the college, and oversight of resource allocation to the departments to fund activities/actions to improve the climate for members of underrepresented groups in the college.

In 2002, we initiated the creation of Climate and Diversity Committees at the departmental level. Many issues and concerns are department specific and can best be addressed at the local level. Each departmental committee has a representative on the college level committee. The departmental committees surveyed their constituencies and developed action plans based on that input. Our multicultural coordinator has worked with the departmental committees to develop plans to improve the overall multi-cultural atmosphere and welcoming nature of the college. A major initiative to improve signage across the college has been started. Work has also begun on creating murals or displays for each department which will celebrate the diversity within the department.

We will continue active support for these departmental Climate and Diversity Committees and will ensure that areas of focus include support for diversity initiatives and under-represented members of our college community and awareness of possible departmental level climate and diversity concerns.

- *Provide adequate resources to the multicultural coordinators in the colleges, including access to college leadership. Efforts to develop a common job description for the coordinators should be supported.*

The college multicultural coordinator will now report directly to the Dean under the amended title of Executive Assistant to the Dean. Resources to support this new alignment of duties and responsibilities will be provided to sustain ECOS diversity initiatives annually. In addition, this position will now include membership in the Executive Committee. To have this position better connected to the academic units, funds will be allocated in a manner that is central to the mission of the departments (grant-in-aids, etc). This office will also partner with the Office of Educational Equity in the Graduate School to enhance recruitment and retention of underrepresented groups.

The Associate Dean and Executive Assistant to the Dean will work with the Graduate School, with our departmental Graduate Recruitment Chairs, and with the college Development Office to identify additional resources for minority graduate fellowships, for graduate student recruiting initiatives, and for partnership activities with minority-serving institutions.

- *Actively support the University's nondiscrimination policy.*

We strongly adhere to the University's nondiscrimination policy as it also nurtures the intellectual climate and vitality of the college.

### Challenge 2: Creating a Welcoming Campus Climate

- *Institute systematic climate improvement initiatives and assessment processes at all levels and locations.*

The college Climate and Diversity Committee has been charged with creating a climate which is reflective of the college's commitment to enhance and sustain a welcoming environment which is inclusive of all groups with an emphasis on unrepresented populations and inter-group relations. The following are examples of major activity areas for the committee over the past several years:

- Faculty/staff relations and staff morale
- Junior faculty mentoring and general climate
- Marginalization of female and senior faculty
- Student advising
- Equity and morale issues for Instructors/Lecturers
- Isolation/departmental interactions
- Host showing of the movie "The Color of Fear" for the college during MLK week
- Student involvement in "The Big Picture", a college-wide, open-house type event to inform the full college community about the missions of the college
- Establishing links with the Commission for Women
- Maternity issues
- Support for non-tenure eligible research faculty

Note that student advising, including minority student advising, is a recurring issue and is one that we are addressing as a core objective for improvement across the college during 2004-5. Quality advising is a critical component of a supportive climate for students. To this end, a staff member has been added to the college Academic Advising Center who will have as one of her major assignments identifying and working with at-risk students.

We will also continue the process of soliciting issues for the Climate and Diversity Committees, but we are asking the college and departmental committees to focus more on diversity and inter-group relations issues for the next several years. A diversity dialogue that will examine the current status of underrepresented groups in the departments will be instrumental in defining this agenda. Similar dialogs will define the agenda for faculty and staff issues.

- *Develop a structured process for identifying climate issues and developing unit-wide approaches for proactively addressing climate concerns.*

The responses above provide a narrative overview of the unit-wide approaches that the ECOS will use to proactively address climate concerns including the college climate committee, a possible focus group process, and the college-wide survey that is being developed. This survey will be conducted in the upcoming academic year and every other year thereafter.

- *Increase the visibility of resources for underrepresented groups (e.g., returning adult students, disabled persons, international students, members of the lesbian, gay, bi-sexual and transgender (LGBT) community).*

Expanded ECOS efforts devoted to both the continuing and the new diversity initiatives described in this report will be a clear indicator of the increased visibility of resources for underrepresented groups. In addition, we will explore the merits of having a diversity advocate appointed in each department. For example, in FY2005, we are planning to explore this idea in two departments, possibly offering funds or incentives to reduce departmental responsibilities

for the diversity advocate so that this faculty member will have time to play an active and proactive role in minority graduate student and faculty recruiting.

We will also measure and evaluate the impact and success of all of our diversity initiatives through the data collection process that we describe in other sections of this report.

- *Create a unit diversity committee.*

As noted, our ECOS Climate and Diversity Committee has been in place since 1999. There has been a tendency for the committee to focus on general climate issues and not specifically on issues of community diversity and equity. We have addressed this concern by setting diversity issues as a top priority for the committee for the coming academic year and beyond.

- *Provide a diversity link on the unit's home page.*

We have completed this task.

- *Encourage awareness training for all faculty and staff.*

Awareness training for faculty is strongly linked with the research, teaching, and service mission of the college. Most major funding opportunities require that a significant contribution to the outreach and diversity objectives of the University be included in the research programs. This research funding gives us an opportunity to bring additional funding to the initiatives started with college resources and further reinforces the value of these programs in the minds of our faculty. All of our faculty members participate in activities hosted by their professional societies. These professional societies also have formal awareness initiatives.

- *Include diversity as a criterion in search processes, etc.*

Over the past two years, we have increased our active emphasis on diversifying our faculty searches. All search committees have been given the book: *Diversifying the Faculty: A Guidebook for Search Committees* by C.S.V. Turner. In addition, the University's Director for Affirmative Action has given presentations to our search committee chairs and our department heads. We will continue these efforts and make available the significant expertise of the Executive Assistant to the Dean in assisting departments in building more diverse pools for staff searches and student recruitment.

Also, the following items from the "tool box" are new initiatives focused on minority faculty recruitment:

#### Minority Faculty Recruitment

- Develop a plan for maintaining current progress in achieving diversity in each department. The success of our current minority faculty members is our best recruitment tool.
- Actively recruit minority candidates for the Provost's Distinguished Post-doctoral Scholar program and explore the provision of additional salary support through the program.
- Advertise positions in publications/newsletters directed at women and minorities that are published by discipline-specific professional societies.
- Track our own outstanding BS and PhD recipients and actively recruit them when they are ready for faculty positions.
- Remind all search committees of the goal to recruit minority faculty and of the incentives available for minority hiring.

- Aggressively identify and seek out minority candidates. Commit to achieving increased diversity among the applicant pool for every search.
- Recruit candidates vigorously and include the following elements in the process: provide outstanding start-up packages and salary offers; carefully organize campus visits, include meetings with other minority faculty; address dual career issues early in the search process, including the use of other University partners across campus to find possible solutions for spousal employment needs.
- Have a diversity advocate in each department who is assigned to actively contribute to minority faculty and graduate student recruitment; consider this role to be a major committee or service assignment in the department.
- The Dean will provide funds to cover the expenses incurred in bringing any minority faculty candidate to campus.

### ***REPRESENTATION (ACCESS AND SUCCESS)***

#### ***Challenge 3: Recruiting and Retaining a Diverse Student Body***

- *Reduce inter-group disparities in undergraduate enrollment, retention, and graduation rates through improvements in recruitment processes and retention initiatives.*

We will continue the following on-going minority undergraduate recruitment activities:

The Eberly College of Science is an active partner with the University when it comes to recruiting and retaining a diverse student body. The Office of Undergraduate Resident Instruction and the ECOS multicultural coordinator have responsibility for coordinating recruiting strategies with the Office of Admissions and various other internal and external constituents of the college. The following description of sample activities illustrates some of the diversity initiatives in which we play a leadership role:

#### **The Pennsylvania Junior Academy of Science**

The Eberly College of Science hosts the annual meeting of the Pennsylvania Junior Academy of Science (PJAS) each spring semester at the University Park Campus. The PJAS is a statewide organization of diverse junior and senior high school students designed to stimulate and promote interest in science among its members through the development of research projects and investigations.

PJAS goals:

- To promote greater participation in science and mathematics activities among the youth of Pennsylvania
- To improve the quality of achievement in mathematics and science by encouraging students to participate in research and develop original ideas

- To develop an understanding of the scientific community through close association with leaders in the sciences
- To seek the improvement of science clubs activities through the cooperative regional and state meetings
- To inculcate among its members true scientific attitudes and humanistic ideals that shall lead to the greater development of service to man

The college is responsible for providing judges for approximately 3,000 science fair projects, which are presented over the course of the meeting. In addition, students who express an interest in the Eberly College of Science and who receive a first-place award during the State Meeting are interviewed, and scholarship offers are made to the most outstanding students, many of whom are members of underrepresented minority groups.

### First Year in Science and Engineering (FISE) House

The FISE program is a diversity program that provides support for minorities and women in the areas of science and engineering. The ALCOA Pennypacker program is a diverse residence hall option at University Park, which houses the FISE program and the Bunton-Waller Fellows program, a scholarship program for underrepresented minority students. FISE was created to enhance the recruitment and retention of underrepresented students who are in their first year of a science or engineering curriculum. The Pennypacker program is a supportive living and studying environment that enhances the retention of students, particularly women and minorities. As seen by the composition of the program, it is our belief that diversity is a quality that benefits all students and makes the Pennypacker program a unique experience at Penn State.

Although the ALCOA Pennypacker program is inclusive of all ethnic groups at Penn State in technical majors, as noted, a core goal is to increase the pool of diverse underrepresented minorities and women and globally competent students in technical and business fields. A related goal is to have 50% female participants and 40% of the participants from underrepresented minority groups. In 2002-2003, female students actually represented 55% of the participants and 37.8% of the students were from underrepresented minority groups. Even though we were pleased with our progress, more attention will be given to enhancing underrepresented minorities for the 2003-04 academic year. In 2002-2003, the Pennypacker program supported 294 students with 87 students in the fall and 76 students in the spring making the Deans' list, with a grade point average of 3.5 or above. In addition, there were a total of 18 students who had a perfect 4.0 grade point average for the 2002-03 academic year. Truly, the ALCOA program at The Pennsylvania State University through the FISE program has enhanced academic performance, provided a diverse living environment, and exposed students to a myriad of industry concepts such as team building and cooperative learning.

### Annual Awards Convocation in Cooperation with the School District of Philadelphia

For the past 14 years, the Awards Convocation Program has been supported and administered by the Eberly College of Science, several other academic colleges, and the School District of Philadelphia. The Convocation is a luncheon that honors the top

sophomores and juniors in each of the high schools in the District. As a recruiting tool, the convocation has proven to be an excellent way for Penn State to identify early and nurture minority prospects – no other University has such an arrangement, which allows access to the transcripts of the best students in the District. These students are targeted for special scholarships and academic opportunities, and ECOS has been the lead agent in sponsoring this program, and in working with the School District of Philadelphia to identify possible undergraduate applicants to the college, since the program’s inception.

#### Program Overview:

The goal of this program is the early identification of prospective, regular, student admits interested in the sciences and inform them of the advantages of attending Penn State. Sophomores and juniors and their parents, high school math and science department chairs, and area alumni participate in this activity. Objectives include:

- To provide students who do not meet the traditional profile of University Scholars but who have high school grade point averages of 3.5 or higher--while receiving SAT combined scores of approximately 1250--the opportunity to be admitted to the Scholars Program, and the University Park campus, in their first year instead of being passed over in the scholarship aid process.
- To provide enrolled students with a comprehensive program of support services, including tutorial, counseling, enhanced academic advising, and career development support, so that they can maintain the requisite average to retain their financial aid awards.

Metrics: These programs continue to be essential to the priority of addressing pipeline issues in ECOS’ technical disciplines. We will continue to measure our success in these areas by noting student participation, retention, recruitment into science majors, and graduation rates.

We will also continue the following on-going ECOS minority undergraduate student retention activities:

#### Cluster Classes

The cluster class concept is designed to assist students to succeed in introductory math and chemistry classes. Classes are offered for the first two courses in calculus and the first course in chemistry. Due to the small size of classes (thirty students or less), students are able to interact more directly with the faculty and receive a greater amount of personal attention. Cluster classes are taught by select University faculty, and students are given personal feedback on their homework assignments concerning improvements in their understanding of concepts and procedure.

#### Undergraduate Summer Research Programs

The Summer Research Opportunity Program (SROP) is an effective retention activity for undergraduate students in the science as well as a recruitment tool for diverse prospective graduate students. A description of the SROP program is found under question 2.

#### Pre-First Year in Engineering & Science (PREF)

PREF is a summer bridge program for first-year students of color in science and engineering at the University Park campus. Preparatory programs for introductory calculus, physics, and chemistry courses are offered to all PREF program students. In addition, time management and study skills seminars are offered to PREF participants to ensure academic success. Experienced Science faculty members participate in the PREF program in addition to current upper-level student assistants. The overall objective of PREF is to maximize the retention of first-year students of color in engineering and science majors.

PREF participants, who are typically Bunton-Waller Fellows, excel in their academic studies as freshman and maintain their status as Scholars.

#### Commonwealth Scholars Programs (Penn State College of Medicine)

The multicultural coordinator in the college, now the Executive Assistant to the Dean, is responsible for coordinating activities with the Penn State College of Medicine, collaborating with other academic units within the University, and selecting students for participation in this program. The program offers research experiences for underrepresented minority students to prepare for medical school, MCAT preparation and shadowing experiences, poster sessions of research projects, and a medical school visitation program.

#### Other Retention Activities

There are several additional initiatives which are not led out of the Eberly College of Science, but in which ECOS faculty and staff participate, that support the college's effort to retain diverse undergraduate and graduate students. Samples of these collaborative programs follow.

First, the Space Grant Consortium sponsors a Minority Undergraduate Research Experience (MURE) program that provides our ECOS minority undergraduates with the opportunity to work in a research laboratory. This opportunity is available to students beginning in their freshman year. The most immediate impact of this program on the students is to provide them with a network of senior undergraduate students and graduate students in the lab that act as tutors, mentors and in some cases advocates for the students. The nurturing educational environment provided to the students by this program markedly increases student retention. Finally, several of our faculty members take part in the Women in Science and Engineering Research (WISER) program aimed at increasing the retention rates of female freshman in science majors.

Other ECOS retention activities include:

- College Scholarships and Awards
- Student Organizations
- Minorities in Science and Technology (MIST)
- Student National Medical Association (SNMA)
- Communications to and among students through development of list-serves and home pages
- Common area for posting information
- Alliance with Residence Life and Housing Services
- Resume database
- Newsgroups (Tutoring and supplemental instruction).

Also, the Pennypacker Program is an important aspect of the college's overall strategy to increase the retention of underrepresented students in technical disciplines.

We also believe that encouraging minority students to engage in undergraduate research could be an important retention and graduation tool. The following is a quote from the college's 2002-2005 strategic plan:

“Many undergraduate research opportunities are supported by sponsored program and departmental funds. We also make maximum use of the President's Fund for Undergraduate Research and supplement it with college funds to maximize the numbers of opportunities. Virtually all students in the physical and mathematical sciences who express a real interest in doing research are given the opportunity. We are, however, unable to meet the huge demand in the biological sciences. Our future strategies for addressing this problem are to add additional faculty members, who are needed in the classroom as well, and to involve more fixed-term faculty, both instructional and research faculty, in mentoring undergraduate research.

This effort aligns with another goal – to help with the national problem of insufficient numbers of minority graduate students and faculty members. We will further encourage minority students to participate in undergraduate research experiences, and we will track the students to see where they go after finishing their baccalaureate degrees.”

To further enhance undergraduate retention, we will implement initiatives from the “tool box”:

#### Minority Undergraduate Student Retention

At the undergraduate level, we will work to achieve the same college retention and graduation rates for minority students as for majority students.

- Make every department (all faculty members) and advising office aware of whom the minority students are starting with freshman, not just declared majors at the junior year. Encourage a team approach (student, department, faculty, exec.asst/multicultural

coordinator) to student support and mentoring. Encourage research experiences for these students early on.

- Make college and department level climate improvements on an on-going basis.
- Provide students with focused, attentive advising, careful balancing of course loads, etc.
- Explore the idea of having junior and senior level minority students. mentor/support/interact with minority students before they arrive and during their freshman and sophomore years.
- Assist with faculty advocacy and getting these relationships established early in each student's enrollment in the college.
- Provide the means for minority students to get involved in research very early. If the faculty members know who the minority students are, they can be more responsive to requests from minority students to work in their labs.
- Provide students with career path information beyond the medical school option. Many of our pre-meds leave the college once they are told they can't get into medical school.
- Encourage minority students' consideration of health profession careers in addition to the traditional MD.
- Continue the program of Dean's support for minority colloquium speakers to bring role models onto campus. Create opportunities for students to meet with these visitors.
- Conduct senior exit interviews to learn from students who have been successful.
- Conduct an analysis of the traditional "weed out" courses. Do we need smaller sections for some at-risk students? Are there certain ways/orders of scheduling courses that are better than others?

Additionally, we are developing a Career Counseling Center and hope to establish a forensic science program to provide a possible alternative outlet for Pre-Med students who are unlikely to receive medical school admission.

In order to improve college climate for all individuals from underrepresented groups, we have encouraged the college climate committee and department level committees to increase their focus on climate for underrepresented groups.

Metrics: The academic units will be asked to provide data which shows the number of participants from the underrepresented groups who have participated in research experiences as a part of their preparation to attend professional/graduate school. Student retention in the major and graduation from The Eberly College of Science will be the metric that measures our success. Departments will report retention and graduation rates for both majority and minority students annually.

- *Develop and implement proactive strategies to recruit and retain nontraditional students. Explore opportunities to create partnerships with historically black colleges and Universities, Hispanic serving institutions, and tribal colleges, as well as other institutions serving underrepresented populations. Best practices, particularly in graduate recruitment, should be shared among units.*

We will continue those current recruiting initiatives which prove to be most successful for graduate students.

The college has contributed to locating and recruiting graduate students from underrepresented groups by coordinating its activities with the graduate school, establishing partnerships with Historically Black Colleges and Universities, offering summer research experiences, participating in research conferences and professional meetings for African/Black American, Latino/Hispanic American and American Indian/Alaskan Native students, and providing fellowships and assistantships to cover the cost of an graduate education. In addition, the college participates in the following programs as part of its efforts to recruit minority students.

### GEM

The National Consortium for Graduate Degrees for Minorities in Engineering and Science, Inc. (GEM) is a program whose purpose is to provide opportunities for underrepresented ethnic minority students to obtain Ph.D. degrees in engineering and the natural sciences through a program of paid summer internships and graduate financial assistance.

The goal of this program is to increase the number of minority students pursuing doctoral degrees in the natural, physical and life sciences (chemistry, physics, mathematics, computer science as well as the earth, biological and pharmaceutical sciences). Fellowships are portable to any participating GEM member University, and include a stipend, tuition and fees. The award is renewable through the University for up to four additional years. Fellows may be required to accept a research or teaching assistantship. A paid summer internship is required prior to entering a doctoral program. The Eberly College of Science is an active member of GEM and the College's multicultural coordinator is a member of the GEM National Board. In this role he sits on the application screening and review committee, makes available list of prospective GEM fellows to the department and recruits GEM participants and monitors GEM fellows' progress towards the degree in college.

### The National Physical Science Consortium

The National Physical Science Consortium (NPSC) is a network of research Universities, national laboratories, and private industries uniting for the purpose of increasing scholarly and career paths in the physical sciences.

The main goal of NPSC is to target underrepresented minorities: African American; Hispanic; Native American Indian, Eskimo, Aleut; Pacific Islander (Polynesian), and/or female. NPSC will work to increase the total number of qualified minorities and women in these fields. Again the Eberly College of Science is an active member of NPSC. The college's multicultural coordinator participates in the recruitment and selection of perspective NPSC Fellows, serves on selection committees and coordinates these activities with the departments to attract these students to the college.

### Undergraduate Summer Research Programs

We have found that an effective strategy for recruiting graduate students regardless of ethnic background is to invite promising undergraduates to Penn State to spend the summer

between their junior and senior years doing research in our faculty research groups. This program is equally effective for minority students, and several of our departments organize such programs. The immediate benefit of this strategy is that it allows faculty to make early decisions about graduate admissions into the department based on the students' performance in their labs rather than relying solely on traditional indices of performance.

### SROP

The Summer Research Opportunities Program (SROP) for Minority Science Students is a collaborative effort of research centers and laboratories at Penn State, which offers research experiences for undergraduate minority scholars in the sciences. Students may elect to participate in a research program in any of these laboratories or centers, or with any other research faculty in the Sciences in the University. Upon acceptance as a minority research scholar in SROP, the student may participate in SROP during the academic year (fall and/or spring semesters) or during the summer session. SROP also accepts applications for summer research assistantships from students enrolled full-time at participating institutions. The purpose of the SROP Program is to increase the interaction of minority science students with faculty, expose these students to the research environment at a large complex research institution, and encourage these students to pursue graduate study and careers in research and academia.

To improve our recruitment of minority graduate students, we will implement initiatives from the "tool box":

### Minority Graduate Student Recruitment

- Actively participate in the SROP and McNair programs (with support from the Associate Dean for Resident Instruction, departments will identify and meet with potential candidates from both programs during their respective annual sessions).
- Develop the ability to offer fellowships as soon as potential applicants are selected.
- Develop a standard offer letter for minority graduate students that offers five years of support contingent on satisfactory progress toward the degree. Top-ups over the standard offer, including a top-up for the summer between the first and second year, may be necessary and appropriate in most cases for minority students.
- Develop meaningful relationships with faculty at Historically Black Colleges and Universities (HBCU) and minority serving institutions including collaborative research, visits, publish together, share teaching materials, etc. It is critical that all relationships with minority serving institutions be mutually beneficial. Other initiatives:
- Make HBCU partners aware of the various workshops offered by ECOS for faculty and students
  - Biotechnology Training Programs – offered during the academic year
  - Bioinformatics workshops – offered in the summer
  - Laboratory workshops on Techniques in Molecular Biology - Loida Escote-Carlson is the instructor
  - Nanofab training and workshops
  - There must be others across campus

- Host a conference to showcase what ECOS has to offer to faculty from HBCU's and minority serving institutions
  - Showcase training and educational opportunities, like those listed above.
  - Showcase collaborative research opportunities including summer or semester sabbaticals or shorter visits for faculty or students.
  - Develop lists of research interests of HBCU faculty and identify matches in the ECOS faculty.
  - Showcase collaborative teaching and course material/curriculum sharing opportunities.
  - Break into face-to-face, faculty discussion sessions by department to explore interest and opportunities at the individual and department levels.
- Find a source of resources so that we can provide travel and tuition support for workshops and travel and salary support for collaborative research opportunities.
- Develop an active minority REU program in the college. Most departments already have active summer research programs for undergraduates; we need to add a focus on minority student recruiting to these efforts and provide competitive stipends/travel/living expenses for these students (\$5-6000/student/summer).
- Institute recruiting trips to appropriate minority serving institutions – departments should work together where possible.
- Provide all-expense paid trips to University Park for key students early in the recruiting process, earlier than the usual recruiting weekends which occur after offers are out. These students can also come back for the usual recruiting weekend, if appropriate.
- Explore establishing mutual articulation agreements with HBCU's like Clark-Atlanta to offer admission to those minority students who they think have a high probability for success at PSU. We might be particularly interested in students who have completed a Masters at Clark-Atlanta or elsewhere. Again, any agreement has to specify a benefit for the other institution as well.
- Have a diversity advocate in each department who has been released from some other duties and has the time and obligation to actively participate in minority student and faculty recruitment.

Metric: Memoranda of agreement with HBCU's or other minority serving institutions will be created to outline and develop a framework for our partnerships. Student recruitment and acceptance into graduate programs, as well as faculty research collaborations which result in grants and research funds, will measure our progress in achieving the above objectives. Departments will be asked to report numbers of minority students who applied, numbers admitted, and number who enrolled each year. We will also collect data on students who refuse our offers of admission and determine where they do enroll. Departments will also tabulate the number of SROP students, number of minority REU students, and number of faculty and students from minority serving institutions who visited our campus. Faculty will also report collaborations and publications with faculty from minority serving institutions.

We will also continue the following, on-going, initiatives for graduate student retention:

The Eberly College of Science recognizes the need to remove barriers that may impede the progress of graduate students. In addressing this issue, the college has decided that

underrepresented students will be provided with financial packages that are in place for as long as the student is making satisfactory progress towards the degree. When a student is admitted into the department, the college and the department together ensure that the student will receive a Fellowship or Assistantship for up to five years. In addition, graduate students are counseled to follow a program of study that permits them to develop effective strategies for course work completion and preparation for their comprehensive examination. Departmental strategies for retention include many of the following activities:

- Departmental orientation and mentoring program
- Guaranteed funding through fellowships and teaching assistantships
- Advising programs designed around academic strength of students
- Support for travel to present papers and research at professional meetings

The college has also implemented the practice of supplementing assistantships and fellowships with bonuses to fund students for two years while they are actively pursuing their degree. In addition, during the first year, students are allowed to focus their time and energy on meeting the academic expectations of their department instead of assuming teaching responsibilities.

The departments have also made special provisions for individual students from time to time. Most common is the need to allow students from less rigorous backgrounds to spend an extra year taking courses to catch up and fill in the holes in their technical backgrounds.

Another retention initiative was developed by Evelyn Ellis, James Stewart, and Eva Pell some years ago. This initiative is a group mentoring program developed to assist graduate students from underrepresented groups in any and every possible way. The goal is not only to increase retention, but to make the overall experience here at Penn State rewarding on all levels. Of course, this effort also impacts ECOS recruiting efforts. If our students feel that all of their needs are being met, then it is likely that they will communicate this fact to members of their existing network.

Also, the Black Graduate Student Association sponsors an Achievement Conference in which ECOS faculty have participated in the past. This conference provides a forum for interaction, network building, mentoring, career enhancement/development, etc.

To further improve graduate student retention, we will implement initiatives from the “Tool Box”:

#### Minority Graduate Student Retention

- Continue to implement college and department level climate improvements as the ideas/opportunities are identified.
- Offer the same transition/bridge support and opportunities to fill in gaps to all students: minority students should not be singled out and made to fall behind their cohort. There are students from a wide range of backgrounds who need support/ remedial courses in one area or another. It is not just the minority students who have these needs.

- Make sure minority students get connected with other minority students across the college and across campus. (Black GSA?) Develop initiatives, perhaps joint with other colleges, to increase a sense of community for our minority students.
- Ensure students are aware of the programs and resources available through the Office of Graduate Educational Equity.
- Faculty advocacy is critical.
- Provide resources as necessary to ensure minority student attendance and presentation at national professional meetings.
- Work to develop an on-going critical mass of minority students in every department
- Continue the program of Dean's support for minority colloquium speakers to bring role models onto campus.
- Conduct student exit interviews and refine diversity strategies annually based on their input.

Improve college climate for all individuals from underrepresented groups:

- Encourage the college climate committee and department level committees to increase their focus on climate for underrepresented groups

Currently, our graduate students do serve in leadership roles in the Black Graduate Student Association (BGSA).

Metrics: Funding is a critical element in ensuring the success of these retention programs. We will tabulate the resources devoted to minority graduate student recruitment and retention at both the college and department level. Each department will also track minority graduate student enrollment, progress through the steps of the candidacy process, graduation rates, and time to graduation.

- *Implement and/or strengthen bridge programs, partnerships, consortia, and mentoring and scholarship programs.*

University scholarships such as the Bunton-Waller (undergraduate) Program could contribute more to recruitment by placing scholarship and scholarly activities as the highest priorities for student selection. Merit based awards would enhance the recruitment efforts of the college to attract more individuals from underrepresented groups into technical disciplines.

We will also continue to ask faculty as part of their research grants submission to build in support for students from underrepresented groups to be recruited into their labs. Also the college will continue to provide resources to fund analogous, college-based research activity for students.

In addition, as described above, we will embark on an aggressive initiative to partner with faculty at minority serving institutions with the goal of establishing research collaborations, having joint publications, creating a pipeline of qualified minority students, and creating a pattern of minority visitors to campus.

- *Identify measurable outcomes to assess program effectiveness, including longer term tracking of participant success.*

Metrics are included in the sections above.

The advising center has challenged themselves to develop better longitudinal data on our graduates, both minority and majority students.

- *Collaborate more effectively among offices and individuals involved with student recruiting and retention to maximize the potential to attract and retain diverse students. Utilizing the expertise of the college multicultural coordinators and the office of Graduate Educational Equity is especially important in graduate recruiting.*

We will ensure communications among departments as they work to implement the initiatives in the “tool box”. Also, the Dean, Associate Dean, and the Executive Assistant to the Dean will work together to coordinate linkages among departments and across campus.

#### Challenge 4: Recruiting and Retaining a Diverse Workforce

- *Develop and implement strategies to improve the success of search processes in identifying and assessing the credentials of women and minority employee candidates for faculty and staff positions.*

#### Staff

The college is committed to strengthening the ties with diverse communities outside of the locality of State College to improve the representation of ECOS staff from underrepresented populations. The college Human Resources Manager is working with the Employment & Compensation Division of the Office of Human Resources (OHR) to explore mechanisms whereby we might make some progress in the area of diversity.

- A large percentage of our staff positions are HR86 positions. Sometimes these jobs serve as an effective transition between the undergraduate and graduate studies for our students. We will poll our current HR86 staff members to see why they took the position and to see how it is or is not helping them to achieve their professional goals. If our belief that this is a good transition route for some students is borne out in the data, we will advertise this possibility to those students who might benefit and might be encouraged to eventually attend graduate school this way. Certainly some of our minority students will fall into this category.
- One additional strategy which is being explored by the college is the possibility of posting vacancies at Grade 15 and 16 simultaneously at Step One and Step Two; this would increase the diversity profile of applicants, increasing the possibility of additional interviews and hires. The proposal, which represents a major departure from current vacancy announcement policy, is currently under consideration at the Office of Human Resources.
- Still another strategy is a more focused participation in OHR diversity programs with interns and summer work experience programs, with an aim to transitioning participants to full time, regular jobs. Our college historically has rarely participated in these programs, and we want to explore how we might encourage greater participation.

- Yet another proposal is to carefully review diverse applicants from positions that have been filled by someone else. Then, when we post similar positions in the future, if the previous candidate is deemed qualified, we would ask the Employment and Compensation Division to encourage the individual to apply, helping to increase the diversity of the pool, and the possibility of interview and selection.

All these approaches should give us the opportunity to increase diversity among the group of individuals interviewed for staff positions. The challenge of not having an indigenous diverse community in State College has strengthened our resolve to establish a dialogue and reach out to communities that we can partner with to create a mutually beneficial plan.

### Faculty

We are currently aggressively advertising a program that will bring outstanding minority post-doctoral candidates to our college. Our intent is to mentor them, ensure their success, and move them into faculty positions. We are also seeking corporate support for extending this program to include female scientists, but our first two attempts have failed.

Analysis of recent faculty recruiting indicates that while the number of applicants from underrepresented groups remains small, our departments have interviewed and extended offers to a proportionally larger percentage of applicants in these groups.

University and college financial support and departmental efforts in recruitment have led to a significant increase in the successful recruitment of female faculty members. Currently 40% of the assistant professors in the college are female.

Dual career issues have had a major impact on our ability to attract female and minority faculty. Spousal hiring is an issue in more than 50% of such recruitments. If we can find appropriate employment for the spouse, we have a better chance of recruitment success. We work aggressively to find spousal employment opportunities. This is a continuing challenge; it is often difficult to find something for the spouse on campus, and the community typically has little to offer.

Aggressive recruitment goals are outlined in our 2002-2005 strategic plan: “Develop the critical masses and climate to ensure that female and minority faculty members feel welcome and supported. With support from the Provost, the Dean, and the departments, we will increase the percentage of female faculty members from the present 15% of the tenured and tenure-track faculty to 25% in the next ten years. We will also seek additional ways, starting with a program of distinguished postdoctoral fellowships designed to groom future faculty members, to recruit additional minority faculty members. One-on-one recruiting and early relationship building have been shown to be elements of successful recruitment of minority candidates.”

In addition, the Dean reminds faculty search committees to review CIC web sites on women and minority Ph.D. recipients and purchases departmental rosters from the Minorities and Women Doctoral Directory to permit committees to further broaden their searches.

Most departments have found that general advertising is less effective than one-on-one personal contact with potential candidates. This is particularly true for minority candidates and senior

female candidates. For junior minority hires, one department has had notable success by identifying qualified candidates early in their graduate training, establishing contact, and making offers of employment before the individual is really on the job market. We have offered this as a best practice in the college. Other departments are beginning to look into this approach.

In cases where we need to hire in a specific sub-discipline, one department has identified, and then contacted, potential female candidates by scouring the recent issues of Science and Nature and identifying individuals with female-sounding names who published notable articles in the target discipline.

Our Chemistry department has tripled the number of women on its faculty in the last several years and now ranks third among the top 50 departments nation-wide in the percentage of female faculty.

In general, our departments of Astronomy and Physics have the smallest pools of female faculty candidates. We are providing extra encouragement and incentives to foster hiring of females onto the tenure track in these departments. Departmental support for increasing female representation is strong.

As noted above, we will implement the “tool box” for faculty recruitment and retention:

#### Minority Faculty Recruitment

- Develop a plan for maintaining current progress in achieving diversity in each department. The success of our current minority faculty members is our best recruitment tool.
- Actively recruit minority candidates for the Provost’s Distinguished Post-doctoral Scholar program and explore the provision of additional salary support through the program.
- Advertise positions in publications/newsletters directed at women and minorities that are published by discipline-specific professional societies.
- Track our own outstanding BS and PhD recipients and actively recruit them when they are ready for faculty positions.
- Remind all search committees of the goal to recruit minority faculty and of the incentives available for minority hiring.
- Aggressively identify and seek out minority candidates. Commit to achieving increased diversity among the applicant pool for every search.
- Recruit candidates vigorously and include the following elements in the process: provide outstanding start-up packages and salary offers; carefully organize campus visits, include meetings with other minority faculty; address dual career issues early in the search process, including the use of other University partners across campus to find possible solutions for spousal employment needs.
- Have a diversity advocate in each department who is assigned to actively contribute to minority faculty and graduate student recruitment; consider this role to be a major committee or service assignment in the department.
- The Dean will provide funds to cover the expenses incurred in bringing any minority faculty candidate to campus.

Metric: Departments and the Dean’s Office will report annually on their success in recruitment, retention, and development of members from diverse groups.

- *Expand faculty and staff retention programs to include all underrepresented groups.*

## Faculty

We will continue those retention activities which are having a positive impact.

The Dean has instituted regular meetings with female faculty members and follows up regularly on issues and needs expressed in those meetings. We have begun hosting social events for pre-tenure faculty and their families in the hopes of fostering a sense of community and facilitating both research and personal connections.

We have also begun work on a resource for new faculty which will point them to all the information they need to begin active and successful research and teaching careers. We have learned that most junior faculty members re-invent the wheel, discovering the needed and available resources on their own with great expenditure of time and effort. Minority and female faculty are most likely not to find someone to point them to these resources, so we believe this information tool will be particularly helpful for female and minority faculty.

Many of the retention efforts happen at the department level. All of our departments have instituted formal or informal mentoring programs to help promote the success and retention of junior faculty members. A little extra monetary support to carry someone through a dry spell, or a small reduction in teaching or service load during a time when a project is wrapping up or a big proposal has to go in has been shown to do much to facilitate success and foster institutional loyalty. We have several specific success stories where this type of intervention made a big difference. We will continue to share these ideas and experiences at our Executive Committee meetings to encourage every department to think creatively about retention strategies for their minority and female faculty.

The college-level Climate and Diversity Committee arranged for interviews of junior faculty members with the University's Senior Mentor (Jim Stewart) to help identify their concerns; the report on that activity is referenced above. We are now planning to hold focus group discussions with the minority members of our college to get similar first-hand input on the issues facing these individuals in our college.

The Dean is also actively exploring opportunities for endowed chairs and professorships to be filled by women and minority faculty members, both for recruiting purposes and to recognize current members of the faculty.

Finally, in situations where highly successful faculty members have obtained offers to move to other institutions, the college has worked hard to counter those offers. These efforts have been variably successful.

For minority faculty members in particular, proactive retention strategies before outside offers are in hand will be particularly important.

We will implement the "tool box" to enhance minority faculty retention.

### Minority Faculty Retention

- Provide outstanding mentoring from day one.
- Do an annual assessment of each individual's situation and proactive resource allocation to ensure retention.
- Provide leadership and professional development opportunities as appropriate.
- Work to develop an on-going critical mass of minority faculty members in the college.
- Make college and department level climate improvements on an on-going basis.

- Develop initiatives, perhaps joint with other colleges, to increase a sense of community for our minority faculty members.
- The college will require demonstrated skills in supporting and managing diversity as a standard qualification for leadership positions and for performance assessment of those in leadership positions.
- Include members of underrepresented groups on key college committees such as P&T, strategic planning, and executive committee, but do not overload these individuals with service responsibilities.

### Staff

One type of staff job that historically attracts minority candidates is the HR86 research support category. These positions are intended, by their design, to meet short term research needs, and the people employed in them typically move on, after a few years, to graduate school or professional positions in industry. There are relatively few opportunities for advancement and continuing employment, given the high degree of specialty involved in particular positions. We are, however, committed to working with employees who wish to remain, but whose current projects are coming to an end.

Another area where we have had success in hiring minorities is in the IT job category. One of the key issues—competitiveness with the national IT market—is being addressed currently by the University as we move toward a new salary administration plan (expected to be in place Spring 2004). It is our hope that we will be able to use this new plan to enhance retention.

Although we currently have no diversity among the higher population staff job families (staff assistant and administrative positions), we have sent almost all of our staff supervisors to the University's Mastering Supervision program and will continue initiatives to enhance the effectiveness of management practices to ensure appropriate retention and development of all staff members. The Associate Dean in the college has committed to developing a workshop on supervisory skills hoping to at least sensitize some of our supervisors to their most egregious behaviors.

For professional and leadership development opportunities for staff members from underrepresented groups, we plan to offer units significant incentives, such as having the Dean's office pay the full cost of courses and other opportunities. Four of our current minority staff members are already at relatively high grades, so career development will not be as simple a promotion in place. We will need to partner with OHR to explore possibilities. Our other two minority staff members are in fixed-term research support positions paid from research grants.

- *What retention strategies have been most successful?*

The active involvement of the department in promoting the success of the faculty or staff member and developing institutional loyalty is key to all retention efforts. Close contact with the department head, involvement of the Dean, and timely infusions of support or relief are also very important. It is very important that everyone feels appreciated and that their contributions are recognized.

- *Accelerate the introduction of “family friendly” policies and programs, expanded reward systems, and expanded personal and professional development opportunities.*

We have already implemented a number of family friendly policies and initiatives in the college. Our college Climate and Diversity Committee led an initiative to develop a draft policy and then worked with the University to get approval to offer one semester of teaching relief for tenure-track faculty after child-birth. We have always supported stays of the tenure clock for child birth and elder care issues. We hold periodic social gatherings for female faculty and for pre-tenure faculty to which families are invited. A breast-feeding/pumping support room has been created in the college for use by nursing mothers.

An area of real need that falls outside the purview of the college is the need to provide more, high quality day care for infants through age 3 on campus. Day care problems can very negatively affect both the happiness and productivity of young parents and has negatively impacted recruiting.

We will continue to look for ways to make the college a more supportive and family-friendly place. Input from the Climate and Diversity Committees will be important.

- *Continue to develop proactive measures for achieving an appropriately representative search pool for faculty and administrative positions, as well as for staff positions, where possible. Utilizing the assistance of the Senior Faculty Mentor and colleagues in other units may help in recruiting faculty from underrepresented groups into non-diverse departments. Highlighting the benefits of Penn State employment as they appeal to targeted audiences may help in developing diverse search pools, especially at the staff level.*

Our goals and initiatives in this area have been described elsewhere in this report.

- *Emphasize retaining and promoting high quality faculty and staff members from underrepresented groups. Efforts may include mentoring, staff development opportunities, and leadership development opportunities. Opportunities for promotion to leadership positions are crucial. Initiatives to increase a sense of community are also imperative for retention.*

Our goals and initiatives in this area have been described elsewhere in this report.

- *Identify and assess initiatives aimed at promoting success and achievement of employees from underrepresented groups. Such efforts vary greatly across units. An inventory of unit-level efforts may lead to enhanced effectiveness of University-wide efforts such as the Senior Faculty Mentor’s services.*

Our goals and initiatives in this area have been described elsewhere in this report.

- *Emphasize diversity-related activities and professional development in employee performance evaluations.*

From the “tool box”: The college will require demonstrated skills in supporting and managing diversity as a standard qualification for leadership positions and for performance assessment of those in leadership positions.

We will continue to ask for a statement on contributions to fostering and supporting diversity in our staff evaluation process.

Beginning with the reports for 2004, we will include a question on diversity support and activities on the faculty activity report.

- *Acknowledge and appropriately value the relationship of diversity within the tenure and promotion process. New approaches to evaluating diversity scholarship must be implemented. Research should be evaluated on its scholarly merits without prejudgments regarding the value of topics and approaches.*

Facilitating appropriate respect and value for collaborative work will be important in our college in this regard. We have already instituted procedures where by we ask for statements from a faculty member's collaborators so as to avoid biases against the value of collaborative work. The literature tells us that this prudence will be increasingly important as our numbers of female and minority faculty increase.

Based on what we learned from Virginia Valian during her visit to campus in November, 2003, we have made our department heads, search committees, P&T committees, and the female faculty members in the college aware of the research which shows that both men and women typically write weaker letters of reference for women than for men. Women are described with fewer superlatives, with more "grindstone" adjectives like hard working, and their excellence is qualified by their gender (men are simply "the best"; women are "the best woman").

- *Encourage respect for intellectual diversity including different schools of thought, scholarship, paradigms, research methodologies, etc.*

We perform annual assessments of the P&T process to look for flaws and biases in our processes, in what we ask for in letters of reference, in how we choose letter writers, etc.

We will be vigilant in ensuring respect for differences in research methodology and scholarship.

## ***EDUCATION AND SCHOLARSHIP***

### ***Challenge 5: Developing a Curriculum That Fosters Intercultural and International Competencies***

- *Institute curricula and research initiatives that provide students with the skills and orientation to function effectively in multicultural workplaces and social environments.*
- *Strengthen the General Education Intercultural/International Competency requirement to focus on preparing students for life and work in today's multicultural world.*
- *Beyond General Education, incorporate/infuse diversity issues, topics, and perspectives as relevant to the topic and scope of each undergraduate and graduate course.*
- *Emphasize understanding of contemporary domestic diversity within national, international, and historical contexts.*
- *Provide resources and opportunities to support scholarship in diversity (i.e., access to quality primary and secondary research materials, support for conference participation, international study, service learning opportunities, etc.).*

- *Explore opportunities afforded by the Africana Research Center and other relevant units to conduct research that can support curriculum transformation efforts. Also, organize workshops, guest speaker series, etc., that provide faculty with information useful for curriculum transformation.*
- *Recognize and value the articulation between faculty research involving issues of diversity and the classroom. Curricula may be expanded and modified to include new areas of inquiry. Service learning opportunities may provide opportunity for integration of research, service and teaching scholarship in the context of engaging with underrepresented and underserved groups in a diverse community. Multicultural teaching and research initiatives must be valued appropriately in tenure and promotion decisions.*

#### To Foster Intercultural Competencies

As a core college of the University, an essential part of our mission is to contribute to the academic growth and development of all students through general education requirements. It is not enough, however, to solely depend on other academic units to integrate diversity into the science curriculum. We must develop a plan which reinforces the goals and values of the college to its students. To address this situation with the intent of having more knowledgeable students who are prepared to function in an increasingly global and diverse community, the college will use its freshman seminar courses to introduce curricula content which explores these issues. A better informed community of scientists who are aware of the many contributions of diverse groups to the scientific community will be advantageous to development of research and policy pertaining to gender, race, and sexual orientation. We anticipate that both the WISE institute and the office of the Vice Provost for Educational Equity will have first year seminar modules available to augment those specific to our disciplines.

We are also planning to work with the College of Liberal Arts to identify the most meaningful multiculturalism GenEd courses to encourage our students to take.

The climate and diversity committee is currently working with the Africana Center to develop a meaningful MLK event/interaction for next year.

#### To Foster International Competencies

We are developing an extramural option to be added to every ECOS undergraduate degree program that will include mandatory international and/or co-op experiences.

We are working with our nine international partner schools to package segments of Penn State degree programs so that it will be clear to our students that they can complete pre-approved courses abroad in satisfaction of ECOS degree requirements. We have sent and will continue to send ECOS faculty abroad in furtherance of this goal.

We are developing, with the cooperation of the central administration, a program of summer courses for international college and pre-college students with the aim of improving the international flavor of the summer session and enhancing the internationalization of our students.

## ***INSTITUTIONAL VIABILITY AND VITALITY***

### ***Challenge 6: Diversifying University Leadership and Management***

- *Demonstrate support and leadership for addressing all of the Challenges/dimensions.*
- *Implement a results-oriented plan for recruiting and retaining diverse administrators. Conduct post-search reviews to identify any impediments to recruiting diverse pools of candidates and assessing credentials that could be avoided in future searches. Explore the feasibility of using executive search firms if current strategies generate few competitive candidates from underrepresented groups and women.*
- *Require demonstrated skills in managing diversity as a standard qualification for all leadership positions.*
- *Compose search committees that are broadly representative and also knowledgeable of the University's diversity objectives. Provide complete information about expectations regarding candidates' skills and experience with managing diversity.*
- *Cultivate diverse management teams at all levels of the University, especially in administrative and advisory levels.*
- *Include members of underrepresented groups in strategic planning committees, senates, and other governing and management bodies within the unit.*
- *Appoint members of diverse groups to University-wide commissions, task forces, and governing bodies.*
- *Provide opportunities for faculty and staff from underrepresented groups to be promoted to leadership positions.*

Our college response to many of these targeted areas is included elsewhere in the report.

We will continue and build on the practices that have enhanced the ECOS community climate and diversity in the last few years. Major areas of progress include a significant increase in the proportion of female faculty and the establishment of active college and departmental Climate and Diversity Committees. Moving forward, the practices of the college will build on our past success as we implement new programs and have a strategic leadership group consisting of the Dean, Associate Deans and the college's Executive Assistant to the Dean (formerly called the multicultural coordinator). We will have regular discussions and planning with the college Executive Committee and periodic involvement of other faculty and staff in climate and diversity planning.

The college has also encouraged employees at all levels in its organization to participate in the University's Leadership and Management Development initiatives and has provided financial support to make it possible. In the case of staff members, this has involved many female

employees and has contributed to their opportunities to move into higher-level positions. We will continue these efforts and expand a process begun informally of consciously offering developmental opportunities to potential future leaders.

Additionally, the college has supported nominations for participation in the University's Administrative Fellows program. Dr. Linda Strauss, a former staff member, participated in the Fellows program several years ago with college support. The college also successfully supported the nomination of Dr. Renee Diehl, Professor of Physics, as a Fellow for 2001/2002.

Also, the college appointed a female Associate Dean. This individual has as part of her responsibilities participation in planning and diversity initiatives. With college support, she was appointed a CIC Academic Leadership Program Fellow for 2001/2002.

Progress in moving minority and female faculty and staff members into leadership positions is proceeding at a pace slower than anticipated. We will continue to nominate minority faculty and staff for the CIC Academic Leadership Program if they are interested. We have also developed a list of individuals, including female and minority group members, whom we believe have the potential and inclination to move into leadership positions. We will ensure that these individuals have opportunities to advance and hone their leadership skills by appointing them to head up key activities in the college, such as the P&T committee and key search committees.

For our minority and female tenure-track faculty members, achieving tenure is the most important prerequisite to leadership development. We purposefully focus our efforts and energies in mentoring these faculty members to maximize their research and teaching accomplishments. As these faculty members achieve tenure, we will look for opportunities to bring them into leadership roles in the college, such as center directors, committee chairs, departmental leadership roles, department heads, CIC Academic Leadership Programs, PSU leadership programs, etc. It is important, however, that we not derail their academic achievement in our push to have female and minority leaders in the college. The goals and aspirations of the subject faculty members will dictate which opportunities are appropriate.

#### Challenge 7: Coordinating Organizational Change to Support Our Diversity Goals

- *Institute any necessary organizational realignments, systems of accountability, resource mobilization and allocation strategies, and long-term planning strategies necessary to ensure realization of the University's diversity goals.*

Our college responses to these challenges are covered elsewhere in this report.

- *Ensure that the unit mission statement and strategic plan reflect the University's strategic emphasis on diversity.*

Our previous strategic plan certainly reflects the University's strategic emphasis on diversity; as does this strategic diversity plan.

- *Assess the efficacy of the existing configuration of offices and current reporting relationships, and identify methods to facilitate and enhance coordination between centralized and decentralized units.*

We are currently undergoing a detailed self-review of the whole Dean's Office. Realignment of offices and reporting relationships could come out of this process. More immediately though, we have decided to have our multicultural coordinator report directly to the Dean in order to bring more clout and visibility to his office. We will diversify our Executive Committee, bring graduate student recruiting coordinators together periodically, and explore instituting a network of departmental diversity advocates.

- *Prioritize diversity initiatives in development initiatives and capital campaigns.*

A major priority in our development campaign is securing funding for a Center for Excellence in Science Education. The goals of this center will be to improve educational outcomes at all levels in the college. The work of the center would include research in pedagogical methods, outcomes assessments, and sharing of best practices across PSU. Included in the plans is research on learning and success among the minority members of the college looking for methodologies to enhance retention and graduation rates of these students.

A number of other diversity initiatives are included in our development priorities. We have already submitted several foundation proposals requesting money to fund a prestigious post-doctoral scholar program for outstanding females, particularly those in physics and astronomy where we still struggle to attract sufficient numbers of qualified female faculty candidates. Included in one of these proposals was a request for funds to support undergraduate research opportunities for minority undergraduates across the college. The proposals submitted to date have not been funded. Funding for the post-doc program and for undergraduate research for minority students continue to be priorities for the development team.

All development teams, and ours is no exception, are working to raise funds for the Trustee Scholarship Program and for the Distinguished Graduate Fellowships. The Trustee Scholarship Program in particular may aid our diversity initiatives since these scholarships aim to increase access for students with financial need.

As always, we are looking for donors to endow faculty positions. These endowed positions are very important for recruitment and retention of top quality faculty and will no doubt aid in attracting and retaining top quality minority faculty members.

- *Identify new approaches to safeguard the financial stability of our diversity priorities.*

Most important to our college is an on-going source of funds to support graduate student recruiting, graduate student fellowships and relationship-building initiatives with minority-serving institutions. We hope that fellowship money will flow from our development activities. It will be important for us to write proposals for extramural funding for these initiatives.

- *Develop meaningful linkages with underrepresented communities.*
- *Define systems of accountability and reward.*

These are discussed elsewhere in the report.

## CONCLUSION

Given Penn State's decentralized structure, our college embraces the responsibility for addressing the four dimensions of diversity noted in this plan and for successfully fulfilling the challenges and targeted areas for improvement within each challenge for our college. We are excited about our "tool box" approach and about the buy-in and support we have received from our faculty and departments. However, full implementation of the Framework rests upon centralized leadership for diversity and University-wide responses to each of the Challenges. We look forward to achieving the goals that we have set out for ourselves in this plan, and we look forward to participating, as active and engaged partners, in the over-all effort to transform Penn State into a truly "pluralistic learning community characterized by excellence".

## **Table of Appendices**

Appendix I A “Tool Box” to Foster Diversity in the Eberly College of Science

Appendix II Metrics and Data Collection Plans for The Eberly College of Science