

I. PROGRAM PERFORMANCE

This indicator includes the number of graduates by field associated with delta from the baseline.

A. What has been the number of students by field, emerging from the pipeline (baseline production of minority B.S. SEM students yearly [since the beginning of the award], graduation rates, and five year goal)? These indicators should be related to the numerical target agreed upon in the award, should be given yearly from the initiation of the award, and compared to national averages.

The Alabama Louis Stokes Alliance for Minority Participation (ALSAMP) began in 1991 with The University of Alabama at Birmingham and eight Historically Black Colleges and Universities (HBCU). The baseline minority undergraduate SEM degree production for the 1990-91 academic year for the Alliance was 437. The numerical target for the Alliance was a 100% increase in minority SEM bachelor degrees by the year 1996, the fifth year of the award. The Alliance's strategy to increase undergraduate degree production was to attract minority students to careers in science, engineering, and mathematics by offering four years of scholarship support to well qualified high school graduating seniors; offering academic support to currently enrolled SEM students; and by making an effort to retain currently enrolled SEM students. The strategy worked extremely well and the Alliance was able to slightly exceed the goals within the agreed upon time period. The Alliance has completed its tenth year and the minority SEM degree production appears to have reached a peak 1999, experienced a slight decline for the first time in the last seven years in 2000, and is back on the increase in 2001.

Table 1 below gives the yearly Minority SEM Bachelor Degrees awarded since the beginning of the project.

**Minority SEM Bachelor Degrees Awarded
1991 - 2001**

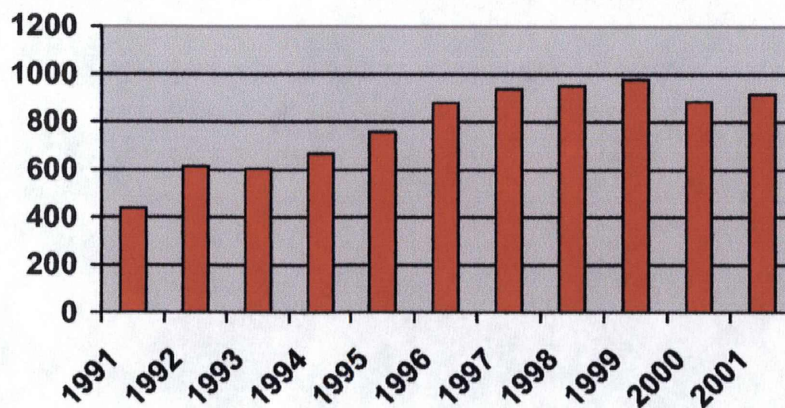


Table 1

Table 2 below gives the Total and SEM Degrees awarded yearly during the period, 1991-1999.

**Total and Minority SEM Degrees Awarded
1991 - 1999**

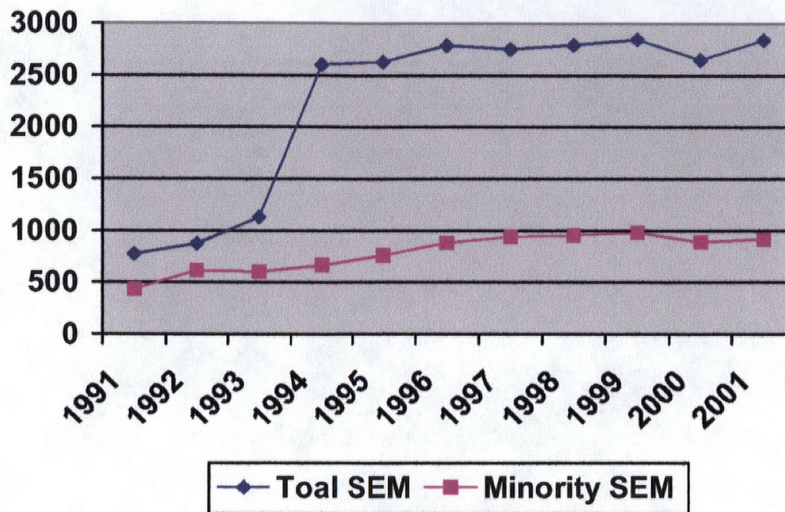


Table 2

It is important to note that both the total and minority SEM Degrees increased this year.

Table 3 below gives the number of SEM Bachelor Degrees awarded to minorities by fields. Note that the three largest degree-producing fields over the seven-year period have been engineering life sciences, and computer sciences.

Minority SEM Bachelor Degrees by Field

Field	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Chemistry	37	40	50	64	76	58	52	61	52	36
Physics/Astro	16	19	17	25	18	18	13	10	13	12
Mathematics	52	68	53	64	41	53	41	63	58	61
Comp Sciences	68	125	85	92	96	82	78	96	119	94
Geosciences	3	2	3	2	2	0	2	1	1	1
Engineering	147	151	208	266	292	284	283	278	251	295
Life Sciences	136	147	198	183	249	314	284	361	258	317
Agri Sciences	75	28	46	50	65	66	71	78	69	60
Other SEM	79	23	8	11	43	64	129	31	67	40
Total	613	603	668	757	882	939	953	979	888	916

Table 3

The 1998 Edition of *Science and Engineering Degrees, by Race/Ethnicity of Recipients*, published by the National Science Foundation, indicates that nationally, in 1995, African Americans were awarded 3,231 bachelor degrees in biological sciences, 3,493 bachelor degrees in mathematics and computer sciences; and 2,845 bachelor degrees in engineering. At the same time, ALSAMP institutions awarded 183 degrees, 156 degrees, and 266 degrees in these fields, respectively. Consequently, in 1995, AAMP awarded 5.7%, 4.5%, and 9.3% of the degrees in these fields, respectively.

III. STUDENT PERFORMANCE

Performance relative to other students in the major at the same institution.

A. Using indicators such as

What are LSAMP students performances compared to other students in the major, at the same institution and nationally?

ALSAMP student performance is excellent. LSAMP scholars are recruited directly from high school. They are given four-year scholarships and are required to maintain a 3.0 GPA in order to continue receiving support. If an LSAMP scholar's GPA falls below 3.0, the scholar is given one term to bring it back up to the 3.0 level. In all cases where an LSAMP scholar's GPA fell below 3.0, it was brought back to the acceptable level. This has set the tone for all minority science students and has thus caused LSAMP students to be a cut above average compared to other SEM students.

The number of LSAMP scholarships awarded by the Alliance has increased from 68 during the first year of the award to 210 during the current year. See Table 4 below.

ALSAMP Scholarships Awarded 1991 - 1999

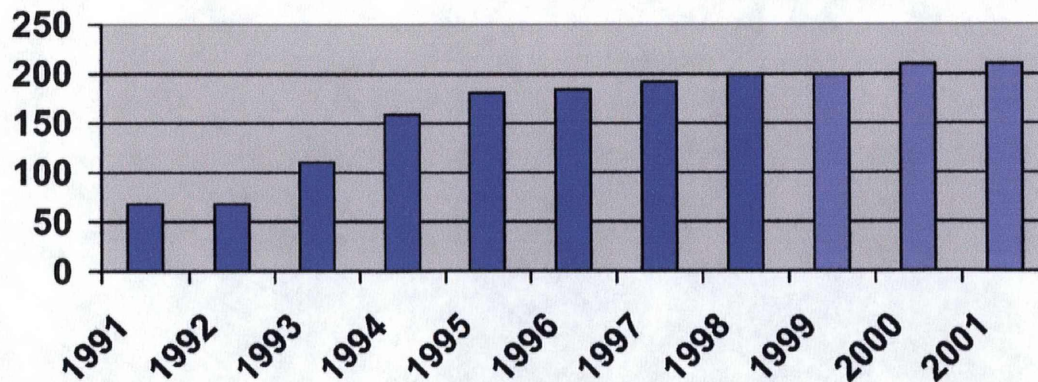


Table 4

The LSAMP scholars' success has certainly increased retention rates because most LSAMP students now stay in school and complete degree requirements. The two factors most involved in the retention of minority students are financial needs and academic success. LSAMP programs and activities, particularly the AAMP Scholarship program and the LSAMP Drop-In Center, are centered on these factors.

The results of a retention study conducted for ALSAMP by the University of Oklahoma indicate that the lower end of the retention rates of ALSAMP institutions has steadily risen from 25.2% before AAMP, to 61.9% as of 1992. This is a direct result of the implementation of ALSAMP activities. ALSAMP students are performing quite well in their undergraduate research in the summer internship programs and some have had their research findings published. The 3.0 GPA requirement is partly responsible for the academic success of ALSAMP students.

IV. ACADEMIC PERFORMANCE INDICATORS

- A. *How has enrollment in SEM majors increased?*
- B. *What is the enrollment of minority individuals in SEM, by year, starting with baseline data?*
- C. *For the transition to graduate school, what has been attributed to the AMP project as contrasted with the individual and/or aggregate impact of other institutional activities on these indicators?*

The baseline minority SEM enrollment for ALSAMP is 3,301. The minority SEM enrollment for the 1999-2000 academic year is 5,876, a 78% increase. Minority SEM enrollment must increase in order that minority degree production increase. For ALSAMP, both minority enrollment and degree production increased significantly over the last nine years.

Table 5 below gives the Minority SEM Student Enrollment yearly during the period, 1999-2000.

Minority SEM Enrollment 1991-2000

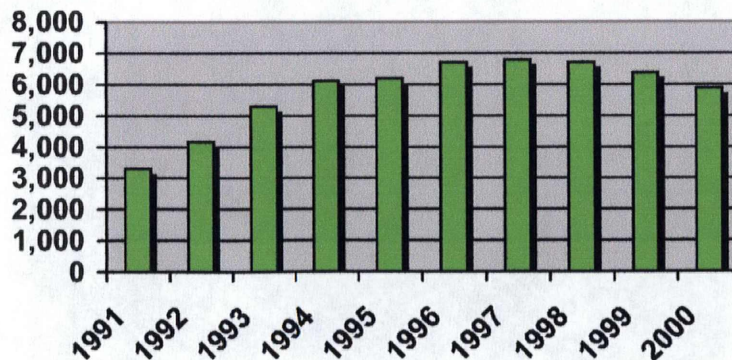


Table 5

Table 6 below gives a comparison of the yearly Total and Minority SEM Enrollments for the period, 1993-1999

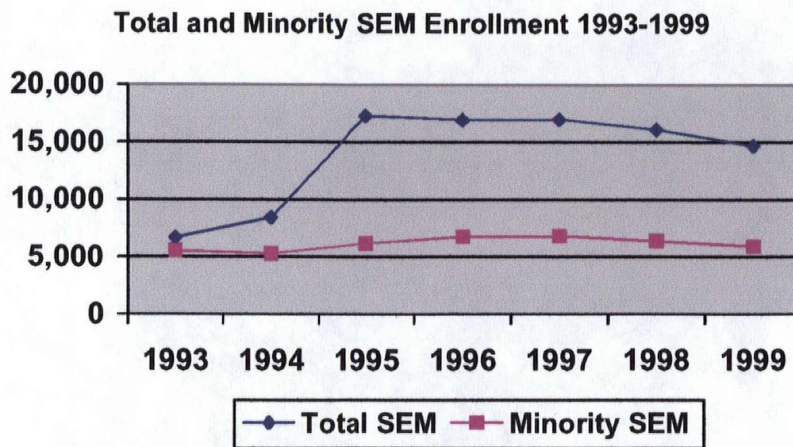


Table 6

AAMP began a pilot graduate bridge program in 1996 to stimulate the transition of minority undergraduate students to graduate school. This effort was part of the ALSAMP Phase II project. The Program is small because of limited funds and has been directly responsible for a number of minority students entering graduate school in ALSAMP and other universities. The University of Alabama at Birmingham, lead institution for ALSAMP, awards eight graduate fellowships to minority students each year. ALSAMP students take advantage of these fellowships as well as others available to minority students.

V. EVIDENCE OF INSTITUTIONALIZATION

- A. *What evidence shows the institutionalization of the LSAMP vision in the university infrastructure (it is important that it not be a marginalized program)?*
- B. *What is the extent of commitment by departments as evidenced by provision of resources and involvement by tenured faculty, and broadening of recruitment practices?*

The Alabama Louis Stokes Alliance has been successful in institutionalizing two of the programs initiated with NSF support. During the first year of the award, each institution was given an average of \$25,000 to start an LSAMP Drop-In Center; a place where students meet to discuss problems, get academic help, and help each other. NSF funds decreased as institutional funds increased, and beginning with the 1996-97 academic year, each campus began support of its Drop-In Center with its own funds. The second program to be institutionalized is the ALSAMP Mentoring Program. Initially, funds were provided to each institution to support mentors for LSAMP students. Now mentors are provided for each LSAMP scholar and each

AAMP intern at the expense of the institution. In particular, The University of Alabama at Birmingham, The University of Alabama in Huntsville, and Alabama A&M University provide research scientists each summer for the AAMP interns who spend 10 weeks on these campuses.

The summer of 1997 was the beginning of new summer bridge programs at Auburn University and The University of Alabama for minority high school graduates. Seed money from the universities and a contribution from the Alabama EPSCoR/DOE program funded these new programs. The two programs are expected to become institutionalized at these universities.

The next target for institutionalization is the AAMP Scholarship Program. Institutions are in the process of finding other sources of funds for scholarships for minority students. The University of Alabama at Birmingham, the lead institution, has taken the lead in providing scholarship support for minority students at both the undergraduate and graduate levels. It is expected that other majority institutions will follow suit. These sources are being phased in as cost-sharing components.