A. PROJECT SUMMARY

The Departments of Computer Science, Engineering, and Mathematics, in collaboration with the Office of Strategic Initiatives and the Center for Academic Success at Louisiana State University (LSU), propose to increase the educational and career opportunities for academically talented, financially disadvantaged students to reach their fullest potential. This will be achieved through a student/faculty partnership with a comprehensive monitoring system under the sponsorship of this NSF/CSEMS program. According to the LSU Office of Student Aid and Scholarship, about one-fifth of the undergraduate students attending the University during the Fall-2001 semester were eligible to receive a U. S. Department of Education Pell Grant. Therefore, a significant number of LSU students meet the financial requirements for scholarship assistance through this project.

The project title is “Information Technology Training and Academic Enhancement Program for Computer Science, Engineering, and Mathematics Undergraduate Students.” The goal of this project is to recruit financially disadvantaged students, to retain these students, and enhance the educational experience of these students in the technology disciplines. Specific objectives are: (1) Recruit qualified students through an active K-12 educational outreach program, including math and science fairs, competitions, and in-school math and science laboratories, (2) Retain these students through the incorporation of student support and mentoring programs, (3) Enhance the educational experience of these students through workshops/seminars, industrial outreach, and community service opportunities, (4) Increase the number of undergraduates, including women and minorities in the above-mentioned disciplines, and (5) Promote intercultural participation among non-minority and minority students.

The project will consist of three activities: (1) mandatory computer and information technology training (average 2 hrs/wk), (2) mandatory academic enhancement activities (average 1 hr/wk), and (3) optional educational and industrial outreach programs (up to 3 hrs/wk). Under the supervision of the PI (Chair of Computer Science), CSEMS Scholars will receive additional information technology training through various workshops and training courses. The Office of Strategic Initiatives and the Center for Academic Success, Co-PIs, and several outstanding LSU faculty members will provide active mentoring and academic assistance for the CSEMS Scholars to maximize their chances for academic success.

With the assistance of the proposed program, 29 students per year majoring in computer science, engineering, or mathematics disciplines will be provided scholarships. Scholarships can be renewed up to graduation. It is estimated that approximately 50% will be minorities and women. The students will be mentored by the PI/Co-PIs and outstanding faculty. The recruitment and selection of students will be based on their residency, financial needs, GPA, statement of purpose, letters of recommendation, and an interview. The scholarship support is $3,125 per academic year. The faculty mentors will also assist CSEMS Scholars in pursuing their professional careers though continuous graduate studies or job placement in industries relevant to their education. The CSEMS Scholars will form a community that will interact regularly with each other, with faculty, and with other students on campus.

In brief, this project will expand the learning community and provide an exciting way to enhance students’ academic, social and personal success at LSU and in their future endeavors.