

1. U. T. Health Science Center - San Antonio and U. T. San Antonio: Request for Authorization to Establish a Joint Master of Science Degree and Doctor of Philosophy Degree in Biomedical Engineering; and to Submit the Proposed Degree Programs and Change in the Institutions' Table of Programs to the Coordinating Board for Approval (Catalog Change)

## RECOMMENDATION

The Chancellor concurs in the recommendation of the Acting Executive Vice Chancellor for Health Affairs, Executive Vice Chancellor for Academic Affairs, President Cigarroa, and President Romo that authorization be granted to U. T. Health Science Center - San Antonio and U. T. San Antonio to establish Joint Master of Science and Doctor of Philosophy in Biomedical Engineering degree programs and to submit the proposal to the Texas Higher Education Coordinating Board for review and appropriate action. In addition, the Coordinating Board will be asked to change the Table of Programs for U. T. Health Science Center - San Antonio and U. T. San Antonio to reflect authorization for the proposed degree programs. A description of the degree programs is included in the Background Information of this agenda item.

Upon approval by the Coordinating Board, the next appropriate catalogs published at U. T. Health Science Center - San Antonio and U. T. San Antonio will be amended to reflect this action.

This item requires the concurrence of the Academic Affairs Committee.

## BACKGROUND INFORMATION

### Program Description

The U. T. Health Science Center - San Antonio and U. T. San Antonio are prepared to offer a joint program in Biomedical Engineering. The objective of the program is to train future scholars in the use of bioengineering approaches to the investigation of questions associated with the diagnosis and treatment of human diseases. The program focuses on applying engineering advances in mechanics, materials, and electronics in musculoskeletal, cardiovascular, and neuro-system paradigms. It is expected that many graduates will remain in the area to provide research and

development for new products in this rapidly expanding business sector. Others will become engineering faculty in this rapidly growing field. This program will be administered by the Graduate School of Biomedical Sciences at U. T. Health Science Center - San Antonio and the Office of Graduate Studies at U. T. San Antonio, and will have a program director with research expertise in the area of biomedical engineering. Students will be required to complete a minimum of 81 hours of graduate work. Students will not be enrolled into the Master of Science in Biomedical Engineering program, but the degree will be an available option for qualified students who have been enrolled into the doctoral program and completed required coursework, but who become unable to complete the requirements for the doctoral degree.

### Program Need and Student Demand

Bioengineers now rank among the top 20 occupations projected to grow the fastest during the 1998-2008 time period, with employment opportunities for engineers specializing in health services fields anticipated to grow by over 20 percent. The proposed joint program will provide a unique opportunity in Texas for doctoral biomedical engineering students to take engineering and medical science courses and conduct interdisciplinary research in one city. Effective interdisciplinary research in fields such as biomedical engineering is best done in teams that work closely together in a supportive environment. Students in this program will receive the training and continuing team support required to prepare them to work in the rapidly expanding area of biomedical engineering.

### Program Quality

The Biomedical Engineering graduate faculty consists of 17 tenured/tenure-track professors from the two sponsoring institutions, who will form the core members of the faculty for the proposed program. Four additional core faculty members, appointed jointly between U. T. Health Science Center - San Antonio and U. T. San Antonio, will be hired over a period of five years to support the program. One of these will be a program director, who will have a national/international reputation for outstanding research in the field of biomedical engineering and leadership potential.

### Program Cost

Total cost for the first five years of the program is estimated to be \$6,945,752, with \$4,568,252 for faculty, staff, and student salaries and stipends and the balance for equipment and supplies. A portion of the costs will be met through formula funding for students in the program, but the majority will be met from sponsored research income. The U. T. San Antonio Engineering/Biotechnology Initiative, currently in the planning stage, will provide initial funding for equipment and several faculty positions. Fellowships funded through the institutions will provide partial support for

students, and funding through the direct-cost portion of faculty grants supporting their individual programs of research will supplement the fellowships. The program is expected to be self-supporting by the fourth year.

### Summary

U. T. Health Science Center - San Antonio and U. T. San Antonio are requesting authorization to establish a Ph.D. Program in Biomedical Engineering with a Master of Science in Biomedical Engineering option for qualified students who have been enrolled into the doctoral program and completed required coursework, but who become unable to complete the requirements for the doctoral degree. The program will train students to use bioengineering approaches to study questions associated with the diagnosis and treatment of human diseases. The program will provide a critical link in the development of new approaches to prevention, diagnosis, and treatment of human disease, for patient rehabilitation, and for improving health. The program will offer students the only opportunity in Texas to receive training in biomedical engineering in a location in which both the participating College of Engineering and Health Science Center are based in the same city.

2. U. T. Health Science Center - San Antonio: Request for Authorization to Establish a Master's Degree in Deaf Education and Hearing Science; Approval to Submit the Proposed Degree Program and Change in the Institution's Table of Programs to the Coordinating Board for Approval (Catalog Change); and Authorization of Certification that Coordinating Board Criteria for Approval Are Met Except for Previous Approval of Planning Authority

### RECOMMENDATION

The Chancellor concurs in the recommendation of the Acting Executive Vice Chancellor for Health Affairs and President Cigarroa that authorization be granted to the U. T. Health Science Center - San Antonio to establish a Master in Deaf Education and Hearing Science degree program; to submit the proposal to the Texas Higher Education Coordinating Board for review and appropriate action; and to authorize the Acting Executive Vice Chancellor for Health Affairs to certify

on behalf of the U. T. Board of Regents that relevant Coordinating Board criteria for approval by the Commissioner of Higher Education have been met except for previous approval of planning authority. In addition, the Coordinating Board will be asked to change the Table of Programs for U. T. Health Science Center - San Antonio to reflect authorization for the proposed degree program. A description of the degree program is included in the Background Information of this agenda item.

Upon approval by the Coordinating Board, the next appropriate catalog published at U. T. Health Science Center - San Antonio will be amended to reflect this action.

## BACKGROUND INFORMATION

### Program Description

This proposal for a Master's Degree in Deaf Education and Hearing Science is a result of three years of work among four educational institutions in San Antonio: The University of Texas Health Science Center at San Antonio, The University of Texas at San Antonio, Sunshine Cottage School for Deaf Children, and Our Lady of the Lake University, Department of Communication Disorders.

Initially, the program will be administratively located in the Department of Occupational Therapy, School of Allied Health Sciences, U. T. Health Science Center - San Antonio. The program is composed of 40 semester credit hours and is proposed to begin in Fall 2002 with seven students. The targeted students are certified teachers, speech pathologists, and others in related fields. The degree program is currently being offered through a partnership between the Sunshine Cottage School for Deaf Children, a private school in San Antonio, and the University of the Incarnate Word. Due to the medical, rehabilitation, health, research, and cultural expertise offered at U. T. Health Science Center - San Antonio, the program will be offered through the School of Allied Health Sciences. This move will better reflect the changes in education and management of the deaf and hearing-impaired. The program is intended to be a foundation program for an eventual multi-institutional doctoral program in Communication Science and Disorders.

### Program Need and Student Demand

The graduates of the program will be employed by public and private educational institutions and schools to provide specific education for those who are deaf or have a hearing impairment. The role of the graduate will include teaching deaf and hearing-impaired students and non-hearing-impaired students. They will have an ability to work with family members, those who are bilingual, teachers in school systems, and medical and health-care professionals, as they supervise and manage the development of a child with special education and health-care needs. Ten new students will be enrolled each of the first two years and 12 new students will be enrolled each year thereafter. The suggested number of students is based on the history of the program, and the appropriateness of the proposed enrollment was confirmed by the Texas Education Agency.

### Program Quality

The curriculum will offer knowledge and skills to the already certified teacher. The curriculum is scheduled during afternoon and evening hours and on weekends so currently employed educators may take advantage of the program. The curriculum includes coursework in human science, behavioral science, social sciences, language development, management, biotechnology, and special education in experiential learning through practice and apprenticeships. The admission standards include teacher certification and a desire to enter the field of deaf education. Applicants are expected to have a 3.0 grade point average in undergraduate work and have taken the GRE or MAT. The physical location of the program will continue to be in the Sunshine Cottage School for Deaf Children. There is a full-time program coordinator and nine adjunct faculty members. The program coordinator is an experienced teacher of deaf children and teacher educator. The speech pathologist and principal at Sunshine Cottage are critical educators and clinicians for the program. They are highly motivated toward graduate education and, eventually, clinical research. Faculty members in the School of Allied Health Sciences, the School of Medicine, and the Graduate School will be involved in the program. The majority of instruction, however, will be conducted by the educators of the hearing-impaired who are already responsible for the accredited program.

### Program Cost

The program will continue to be housed at Sunshine Cottage School for Deaf Children. The management practicum and teaching experiences will be held at Sunshine Cottage, schools for the deaf, and public schools in San Antonio. In addition, clinics, social service agencies, and the School of Medicine will also be used. The initial cost for the first two years to U. T. Health Science Center - San Antonio is for adjunct faculty members. Sunshine Cottage will pay the other two-thirds of the cost of operation. It is intended that within the third year of the

program, it will become self-supporting through formula funds received from the State. The five-year cost projection for the program is \$588,359 of which U. T. Health Science Center - San Antonio's share will be \$446,242.

#### Coordinating Board Criteria

The program meets seven of the eight applicable Coordinating Board criteria for degree programs that may be approved by the Commissioner of Higher Education on behalf of the Coordinating Board. The proposed Master in Deaf Education and Hearing Science degree program is not included in the Table of Programs previously approved by the Coordinating Board for the U. T. Health Science Center - San Antonio; therefore, the proposed degree program does not meet the Certification for Approval of a New Bachelor's and Master's Level Program by the Commissioner and must be approved by the Coordinating Board.

#### Summary

U. T. Health Science Center - San Antonio is requesting authorization to establish a Master of Deaf Education and Hearing Science degree program and to submit the proposed degree program to the Texas Higher Education Coordinating Board for approval. There is a strong need for this degree in the region. The proposed degree will help to fill this need and to fulfill the desire of U. T. Health Science Center - San Antonio to meet the educational needs of students and community constituents in this region.

3. U. T. Health Science Center - San Antonio: Request for Planning Authority to Develop Master's and Doctoral Level Sports Sciences Programs in Collaboration with U. T. San Antonio and U. T. Austin

#### RECOMMENDATION

The Chancellor concurs in the recommendation of the Acting Executive Vice Chancellor for Health Affairs, the Executive Vice Chancellor for Academic Affairs, President Cigarroa, President Romo, and President Faulkner that approval be granted for planning authority to develop Master's and Doctoral Sports Sciences Programs at U. T. Health Science Center - San Antonio in collaboration with U. T. San Antonio and U. T. Austin and to submit the proposal to the Texas Higher Education Coordinating Board for review and appropriate action.

## BACKGROUND INFORMATION

It is anticipated that the Master's and Doctoral Sports Sciences Programs will become a part of the U. T. San Antonio Life Sciences Institute and will link the resources of the three campuses to develop and implement joint educational programs and research in Sports Sciences. Initial efforts will focus on pursuing educational programs in sports psychology, human performance, and sports medicine. The proposed programs will be developed in concert with the Texas Higher Education Coordinating Board's strategic plan, "Closing the Gaps", and will target statewide goals of participation, success, research, and excellence. Letters of agreement have been received from U. T. San Antonio and U. T. Austin.