

**DATE:** July 15, 2004

**SUBJECT:** Southwest Tennessee Community College, Associate of Applied Science in Biotechnology

**ACTION RECOMMENDED:** Approval

**BACKGROUND INFORMATION:** The proposed associate degree is designed to prepare students with basic skills to work as entry-level laboratory technicians in biotechnology. The training encompasses microbiology, molecular biology, chemical application and laboratory management and safety in order to function in a research, healthcare, or industrial biotechnology environment.

**PROPOSED START-UP DATE:** Upon approval

Commission staff have reviewed this program proposal according to the academic standards adopted by the Commission on November 14, 2002. Each standard is referenced below.

**1.1.20A MISSION:** The proposed program adheres to the role and scope of the institution, to provide educational opportunities to the urban and rural constituencies of the service area.

**1.1.20B CURRICULUM:** The proposed degree requires the completion of 60 semester hours. Five courses in the curriculum will be newly developed. The major field core (33 hrs.) includes microbiology, biotechnology techniques, chemistry and instrumentation. There is also an internship requirement for experiential training for students in the workplace.

<u>Course Name</u>	<u>Credit Hours</u>
General Education	16
Major Field Core	33
Electives	<u>11</u>
	60

**1.1.20C ACADEMIC STANDARDS:** Students must obtain degree admission status, complete developmental/prerequisites as required, maintain a 2.0 GPA and successfully complete an internship.

<b>Projected Program Productivity</b>		
Student	FTE	
Projections	Enrollment	Graduates
Year 1	10	0
Year 2	13	5
Year 3	18	10

**1.1.20D FACULTY:** No additional full-time faculty is needed in the first year. Existing faculty will be reassigned and the need for one part-time (adjunct) faculty member is anticipated.

**1.1.20E LIBRARY RESOURCES:** No additional library resources are required.

**1.1.20F ADMINISTRATION/ORGANIZATION:** The proposed program will be housed in the Natural Science Department.

**1.1.20G SUPPORT RESOURCES:** None indicated.

**1.1.20H FACILITIES/INSTRUCTIONAL EQUIPMENT:** Current facilities are adequate to accommodate the proposed program. Equipment for instructional purposes will be funded through the student Technology Access Fee.

**1.1.20I STUDENT/EMPLOYER DEMANDS:** In January 2003, the Batelle Institute presented a report regarding the strengths and challenges of Memphis as a biotechnology center. The report indicated a critical need for workforce training programs to increase the supply of qualified lab technicians and production workers for industry and academic research. The Memphis Regional Chambers Biotech Human Capital Study identified five sectors for which training is needed. The report identified the types of entry level jobs and skills attainable with the associate degree. Program graduates will fulfill workforce needs in the city of Memphis and the surrounding region. Results of a student survey indicated strong interest of students in the proposed program.

**1.1.20J NO UNNECESSARY DUPLICATION:** The proposed program is being offered within the service area of SWCC. No similar associate degree programs exist in Tennessee.

**1.1.20K COOPERATIVE INSTITUTIONS:** The proposed program will provide opportunities for collaboration among the Technology Center at Memphis, the University of Memphis, the University of Tennessee Health Science Center and St. Jude Children's Hospital.

**1.1.20L DESEGREGATION:** The program will not impede the state's effort to achieve racial diversity.

**1.1.20M ASSESSMENT/EVALUATION AND ACCREDITATION:** The proposed program will be assessed based on the enrollment, pass rate on major field exams, and graduate and employer evaluations. There are no implications for SACS accreditation.

**1.1.20N ARTICULATION:** The proposed program is designed to fill a present need for entry-level biotechnicians in academic institutions, state research agencies, and private industry in the greater Memphis area. This program is not designed a transfer to another program, but to be one element in a partnership, to make Memphis a national biotechnology research hub.

**1.1.20O EXTERNAL JUDGMENT (Graduate Programs):** N/A

**1.1.20P COST/BENEFIT/SOURCE:** West Tennessee has historically had a significant biomedical presence. The opportunity to provide education and training for the local community supports the primary mission of Southwest Tennessee Community College. The proposed program will not only improve the economic outlook for the one in six families that live below the poverty line in Memphis, but will also fulfill workforce needs in the city and the surrounding region for biotechnicians.

	Year 1	Year 2	Year 3	Year 4	Year 5
1. Expenditures					
A. One – time:					
New/renovated space	-	-	-	-	-
Equipment	38,000	8,000	5,000	10,000	10,000
Library	3,000	800	800	800	800
Consultants	-	-	-	-	-
Other	-	-	-	-	-
Total for One-time Expenditures	41,000	8,800	5,800	10,800	10,800
B. Recurring:					
Administration					
Faculty Full time	15,000	15,000	40,000	40,000	40,000
Faculty Part time	12,000	12,000	12,000	12,000	12,000
Staff		20,000	20,000	20,000	20,000
Benefits	5,000	7,500	12,000	12,000	12,000
Supplies	9,000	9,000	10,000	11,000	12,000
Library	750	750	750	750	750
Travel	-	-	-	-	-
Other	-	-	-	-	-
Total for Recurring Expenditures	41,750	64,250	94,750	95,750	96,750
<b>TOTAL (A + B)</b>	<b>82,750</b>	<b>73,050</b>	<b>100,550</b>	<b>106,550</b>	<b>107,550</b>
2. Revenues					
State appropriations (new, FTE)	-	-	-	-	-
State appropriations (old)	41,750	55,250	79,750	78,750	78,750
Tuition	9,750	9,000	15,000	17,000	18,000
Fees	31,250	8,800	5,800	10,800	10,800
Institutional Resources	-	-	-	-	-
Grants/Contracts	-	-	-	-	-
Gifts	-	-	-	-	-
Other (in-kind donations, etc.)	-	-	-	-	-
<b>TOTAL REVENUES</b>	<b>82,750</b>	<b>73,050</b>	<b>100,550</b>	<b>106,550</b>	<b>107,550</b>

**1.1.30 POST APPROVAL MONITORING:** An annual performance review of the proposed program will be conducted for the three years following approval. The review will be based on goals established in the approved program proposal.