

**DATE:** July 27, 2006

**SUBJECT:** Northeast State Technical Community College, Certificate in  
Chemical Process Operations

**ACTION RECOMMENDED:** Approval

**BACKGROUND INFORMATION:** The primary objective of the proposed Chemical Process Operations certificate is to prepare individuals for employment in chemical and related industries in process and equipment operation. With the required knowledge and skills, individuals can operate equipment, make process changes, and work safely in a chemical industrial environment. This certificate was requested by industry partners to assist them in meeting their workforce development needs.

**PROPOSED START-UP DATE:** Fall 2006

Commission staff has reviewed program proposals 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 is consistent with and adheres to the role and scope of the mission of Northeast State Technical Community College to “continually seek out the educational and training needs of the diverse populations of the region and develop quality programs to meet these needs.”

**1.1.20B CURRICULUM:** The proposed program combines courses from existing curricula to create a curriculum that integrates interdisciplinary studies in the Science and Technology divisions. The proposed certificate, conceptualized through partnerships with the local industries, will require completion of 28 semester credit hours distributed as follows:

<u>Curriculum Component</u>	<u>Hours Required</u>
General Education	N/A
Major Field Core	28
TOTAL:	28

**1.1.20C ACADEMIC STANDARDS:** Admission, retention, and graduation requirements will be the same as standard institutional requirements of other associate of applied degree programs offered at NSTCC and are published in the institution’s *Catalog*.

Student Projections	Projected Program Productivity		
	Full-time Enrollment	Part-time	Graduates
Year 1	20	10	15
Year 2	25	15	20
Year 3	28	17	25

**1.1.20D FACULTY:** One additional new full-time faculty member will be hired to teach courses. Adjunct faculty will be added, as required.

**1.1.20E LIBRARY RESOURCES:** No additional resources are needed to support the proposed program.

**1.1.20F ADMINISTRATION/ORGANIZATION:** The proposed certificate will be housed in the Technical Education Division and will be under the supervision of the Dean of Technical Education. Designed to be multidisciplinary, the Sciences Division will coordinate the certificate's chemistry courses.

**1.1.20G SUPPORT RESOURCES:** NSTCC plans to develop a co-op program for students pursuing the Chemical Process Operations certificate with regional chemical industry companies.

**1.1.20H FACILITIES/INSTRUCTIONAL EQUIPMENT:** Current facilities and instructional equipment are adequate to support implementation of the proposed program.

**1.1.20I STUDENT/EMPLOYER DEMANDS:** The potential impact on the community is considerable since the three industrial partners have indicated a need for chemical process operators. Three (3) local companies - Nuclear Fuel Services, Eastman Chemical Company, and BAE Systems - estimate a workforce demand of over 600 new chemical process operator positions in the next five years due to anticipated retirements and routine turnover. This certificate is also applicable to the pharmaceutical industry and waste water industries. Area industries have requested that Northeast State develop this curriculum to meet their staffing needs for qualified workers with advanced skills required by operators in the chemical industry.

**1.1.20J NO UNNECESSARY DUPLICATION:** The proposed certificate will be offered in the counties that serve in the service areas of the college. There are no similar certificate programs in East Tennessee, Southwest Virginia, or within the region that train chemical process operations to meet the needs of regional business and industry.

**1.1.20K COOPERATIVE INSTITUTIONS:** N/A

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

**1.1.20M ASSESSMENT/EVALUATION AND ACCREDITATION:** Program evaluations will be conducted annually by the Placement Office and institutional assessments will be conducted by the Institutional Effectiveness Office. The annual program review and other assessments conducted by the Technical Education Division will be used to determine program effectiveness and the need for improvements. The indicators to evaluate the proposed program include enrollment and persistence rates, student evaluations, student surveys, and feedback from the companies employing graduates. There is no accreditation available for the proposed certificate; however, the academic audit process will be used for institutional effectiveness. There are no SACS implications.

**1.1.20N ARTICULATION:** The curriculum for the proposed certificate is designed to provide training to move students into the workforce and does not include the general education core required for transfer programs.

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

**1.1.20P COST/BENEFIT/SOURCE:** The Chemical Process Operations certificate is expected to have a positive impact on students and industry in the region. Several companies have indicated financial and in-kind support for the program.

**Northeast State Technical Community College  
Chemical Process Operations (Certificate)  
Three Year Projections**

<b>I. Expenditures</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
<b>Faculty</b>			
Salary	15,000	30,600	31,212
Benefits	3,750	16,782	17,118
<b>Sub-Total Faculty</b>	18,750	47,382	48,330
<b>Operating</b>			
Travel	300	300	300
Printing	0	0	0
Equipment	0	0	0
Other	1,500	1,500	1,500
<b>Sub-Total Operating</b>	1,800	1,800	1,800
<b>Total Recurring</b>	20,550	49,182	50,130
 <b>TOTAL EXPENDITURES</b>	 <b>20,550</b>	 <b>49,182</b>	 <b>50,130</b>
 <b>II. Revenue</b>	 <b>Year 1</b>	 <b>Year 2</b>	 <b>Year 3</b>
Tuition and Fees <sup>1</sup>	28,340	50,428	66,744
Institutional Reallocations <sup>2</sup>	(7,790)	(1,246)	(16,614)
Federal Grants <sup>3</sup>	0	0	0
Private Grants or Gifts <sup>4</sup>	0	0	0
Other <sup>5</sup>	0	0	0
<b>TOTAL REVENUES</b>	<b>20,550</b>	<b>49,182</b>	<b>50,130</b>

1) Tuition and fee revenues expected to be generated in 2006-07.

**1.1.30 POST APPROVAL MONITORING:** An annual performance review of the proposed program will be conducted for the first five years following established in the approved program proposal. At the end of this period, campus, governing board, and Commission staff will perform a summative evaluation. These goals include, but are not limited to enrollment and graduation, program costs, progress toward accreditation, library acquisitions, student performance and other goals set by the institution and agreed upon by governing board and Commission staff. As a result of this evaluation, if the program is found to be deficient, the Commission may recommend that the governing board terminate the program. Copies of such recommendation will be forwarded to the Education Committees of the General Assembly. The Commission may also choose to extend this period if additional time is needed and requested by the governing board.