BACKGROUND AND REQUEST

Stark State College of Technology
Associate of Science in Computational Science

Recommendation
This program clearly meets the Chancellor's standards for associate degree programs.
There were no serious concerns raised in this review.

Request: Stark State College of Technology proposes an Associate of Science in Computational Science in response to Ohio's growing need for trained computational science technicians. Computational science is defined as the use of computer modeling and simulation to solve complex business, technical and academic research problems.

Recognizing the importance of computational science to Ohio's growing economy and the need for Ohio students to be educated in this field, the Ohio Board of Regents created the Ralph Regula School of Computational Science in December 2005. The "virtual" school, a collaboration involving the Ohio Board of Regents, Ohio Supercomputer Center, Ohio Learning Network, and Ohio colleges and universities, coordinates statewide initiatives in computational science. Working under the auspices of the school, Stark State is part of a coalition that includes Sinclair and Owens community colleges. The coalition, established as part of a National Science Foundation Grant, works to expand Ohio's capacity for educating community college students in computational science.

Program Purpose/Mission: The purpose of the Associate of Science in Computational Science degree is to provide students with the education they need to become computational science technicians. Goals of the program include: improve the retention of students pursuing science and engineering degrees; impact Ohio's national competitiveness in the field; and provide Ohio companies with the highly skilled trained technicians they need.

Graduates of the program will be able to find career opportunities with medical and science research laboratories; agricultural and environmental firms; local, state and federal agencies; research universities; biotech, bioscience, and biomathematics companies; engineering firms, and others. Starting salaries range from $48,000 to $55,000 a year, with graduates potentially earning as much as $90,000 annually after two-years of successful employment.

Enrollment: The college is projecting an enrollment of fifteen full-time students and twenty part-time students beginning fall semester 2009, and anticipates enrollment will grow to twenty full-time students and twenty-five part-time students in fall 2010.

The college's Young Women and Summer Science Institutes, Project Lead the Way, STEM Academy in Computational Science and Engineering, and the Ralph Regula School of Computational Science have generated student interest in the program.

Curriculum: The curriculum is structured to provide students with the general education and technical courses required for the proposed program. Students will complete specialized courses such as Computational Science Methods, Modeling and Simulation, Program Logic and Problem Solving, and Computational Biology. A variety of teaching methods will be used, such as problem-driven learning, to engage students in their learning environment.

An articulation agreement was signed by the fourteen institutions participating in the Ralph Regula School of Computational Science. In addition, the college is exploring the possibility of establishing an interdepartmental transfer agreement with the University of Akron and Kent State University that will ensure the transfer of credits among specific areas of study at the institutions.

Faculty/Resource Needs: The proposed program will be located within the science department in the General Studies Division. The Dean of the General Studies Division will provide program oversight for staffing, funding and academic support. Faculty members from the science, math, and engineering technologies departments will be taking the lead in course instruction. As program enrollment grows, the college is prepared to add additional full-time faculty members as needed.

The college has dedicated a state-of-art classroom to support the proposed program and students will have their own computer and additional work space for laboratory exercises. Students enrolled in the program will have access to the campus library, student support services, financial aid, and other services to ensure their academic success. The college is financially prepared to offer this program.

Program Duplication: The proposed program is not being offered at any two-year institutions within one hundred miles of the college. Sinclair Community College and Owens Community College, which offer a similar program, have collaborated with Stark State on several projects and are willing to share "best practices" with other institutions interested in offering this and/or a similar program.

End of comment period: August 12, 2009
No Comments Received, Recommend Approval

APPROVED

Eric D. Fingerhut, Chancellor

8/25/2009
Date

MK