TO: The Honorable the Members of the Board of Regents

FROM: John L. D'Agati

SUBJECT: Master Plan Amendment: State University of New York Polytechnic Institute, Ph.D. in Nanoscale Engineering and Ph.D. in Nanoscale Sciences

DATE: May 11, 2015

AUTHORIZATION(S):

SUMMARY

Issue for Decision (Consent Agenda)

Should the Board of Regents approve a master plan amendment for the State University of New York to authorize the SUNY Polytechnic Institute to offer its first doctoral programs, a Ph.D. in Nanoscale Engineering and a Ph.D. in Nanoscale Sciences?

Reason(s) for Consideration

Required by State Regulation.

Proposed Handling

This question will come before the full Board at its May 2015 meeting, where it will be voted on and action taken.

Procedural History

A master plan amendment is required because these would be the Institute's first doctoral programs.

Background Information

The State University of New York Polytechnic Institute, formerly known as the SUNY Institute of Technology at Utica-Rome (SUNY IT), seeks authority to award the Doctor of Philosophy degree in support of registering Ph.D. programs in Nanoscale Engineering and in Nanoscale Science.

The Department originally registered these Ph.D. programs at SUNY Albany in 2003 (Nanoscale Engineering) and 2006 (Nanoscale Science). The programs have resided in SUNY Albany's College of Nanoscale Science and Engineering (CNSE) since then.

In March 2014, the SUNY Board of Trustees voted to merge CNSE and SUNY IT. The Department subsequently approved the Utica and CNSE campuses as co-principal locations. The combined campuses now operate as the State University of New York Polytechnic Institute.

Now that CNSE is a constituent of the Polytechnic Institute, SUNY system seeks to register the Ph.D. programs in Nanoscale Engineering and in Nanoscale Science at the Institute. Master plan amendment is needed because these would be the first doctoral programs registered to the Institute. In addition, the proposed master plan action will support the registration of two existing multiple-award programs that incorporate the nanoscale Ph.D. programs:

- an M.D./Ph.D. program in Medicine and Nanoscale Science; and
- an M.D./Ph.D. program in Medicine and Nanoscale Engineering.

These M.D./Ph.D. programs are now jointly registered at SUNY Downstate Medical Center (which awards the M.D.) and SUNY Albany (which awards the Ph.D.).

All of the existing nanoscale doctoral program registrations will continue simultaneously at SUNY Albany until January 1, 2022. This will provide currently enrolled Ph.D. students the option of graduating with a SUNY Albany award.

According to the master plan amendment application, staff, laboratory, and other academic resources that have been in place at the Albany campus will continue under the aegis of the SUNY Polytechnic Institute. This includes the highly qualified faculty members who have supported the nanoscale programs since the programs' inception.

The Department waived master planning requirements for an external review and a canvass of regional and doctoral institutions in this case because these programs were reviewed when the Department registered them at SUNY Albany. If the Regents and the Governor approve this master plan amendment, the Department will register the programs at SUNY Polytechnic Institute with a master plan restriction. This means that future doctoral proposals developed by the Institute will continue to be subject to all elements of the master plan process, as required.

Programs and Need

The Nanoscale Engineering program focuses on design, fabrication, and integration skills in support of developing and deploying emerging nanotechnologies. The Nanoscale Science program is designed to provide a theoretical and experimental base for knowledge creation in nanoscale materials, structures, and architectures. Program content will be unchanged and will continue to be offered at the CNSE campus in Albany. Elements such as candidacy exams, dissertation research, and dissertation submission and defense remain in place. Each program will continue to require the

completion of 60 credits. Combined, the nanoscale doctoral programs (including the joint programs with SUNY Downstate Medical Center) enroll 155 students.

The nanoscale programs represent an important piece of the State's response to the 2004 National Nanotechnology Initiative. SUNY cites a National Science Foundation sponsored report that projects the need for two million nanotechnology workers in the U.S. alone by the year 2020.[1] In its application for master plan amendment, SUNY further states that SUNY Polytechnic Institute forms "a broader foundation from which CNSE's academic initiatives can expand across New York State's burgeoning nanotechnology corridor stretching from the Hudson Valley to the Mohawk Valley and all of western New York."

Recommendation

VOTED, that the Board of Regents approve an amendment to the master plan of the State University University of New York to authorize SUNY Polytechnic Institute to offer its first doctoral programs, consisting of Ph.D. programs in Nanoscale Engineering and in Nanoscale Science. The amendment will be effective until April 30, 2016, unless the Department registers the programs prior to that date, in which case master plan amendment shall be without term.

Timetable for Implementation

If the Board of Regents approves the master plan amendment, the Department will transmit it to the Governor with a recommendation for favorable action. Following gubernatorial approval, the Department will register the programs at SUNY Polytechnic Institute.

[1] *WTEC Panel Report on Nanotechnology Research Directions for Societal Needs in 2020 Retrospective and Outlook*, http://www.nano.gov/sites/default/files/pub_resource/wtec_nano2_report.pdf