SUNY High Needs Program

Request for Proposals
2013-2014

I.   Introduction

Central to the *Power of SUNY* strategic plan is the State University of New York's commitment to serve as a key engine of revitalization for New York State's economy. One of the many ways in which this commitment is demonstrated is an intentional effort to link SUNY's academic programs, where possible, to specific workforce needs of the state.

The High Needs Program has supported these efforts by providing grant support for those professional programs that connect directly to occupations crucial to the economic vitality of New York such as engineering, engineering technology and healthcare.

To date, the SUNY High Needs Program has distributed almost $28 million to 28 SUNY campuses, principally to support or expand nursing and engineering programs. The scope of this initiative has been impressive with over 1,000 students per year added or retained, expansion of LPN to RN programs, and addition of new and innovative engineering programs. Thousands of students have taken part in high needs programs across the state on campuses that otherwise would not have had the academic and physical capacity to enroll them. This program complements existing support to community colleges, currently $1.7 million, provided under the Aid to Localities budget, to help support high-cost, high-needs programs.

While many of these programs require significant resources to operate, with start-up and expansion requiring particularly heavy investment (equipment, faculty, accreditation), it is clear that the multiplier effect from investment in high-need areas is significant, justifying targeted, strategic investments. SUNY's newly approved enrollment-driven resource allocation model will provide a higher level of on-going support for these programs. In addition, another $1.2 million has been requested within the Aid to Localities budget to be added to the community college portion of high needs grants if approved. The 2012-13 High Needs Program Request for Proposals is reflective of these considerations.

II.   About this Request for Proposals

In considering proposals under the High Needs Program, SUNY will focus on the occupations that typically require postsecondary education, determine the relevant academic programs for those occupations, and evaluate a campus' ability to successfully align programs to meet state needs (see Appendix B: Table 2). The Office of the Executive Vice Chancellor and Provost will coordinate campus program reviewers to determine the academic capacity for the potential high needs areas. This includes collaboration with the State University Construction Fund to consider the physical capacity at campuses for program expansion/creation in high needs areas consistent with each campus' Facilities Master Plan.

New guidelines for fiscal year 2013-14 refocus both High Needs Programs to be an avenue to seed expansion or development of academic programs geared toward occupations that are in high need statewide and/or regionally. The program funding will now be competitive and limited to 1-3 years of support for new program development or program expansion. Campus proposals must demonstrate how the program will become self-sustaining after the High Needs funding ends. Funds are limited to 1-3 years to allow the high needs program to be flexible with the economy and the changing areas of high need.

SUNY's Academic Programs and Planning Office will coordinate with campus program reviewers to determine the academic capacity for the potential high needs areas. SUNY is also working with the State University Construction Fund and their recently finished Facilities Master Plans to determine the physical capacity at campuses for program expansion/creation in high needs areas.

SUNY worked with Empire State Development and the New York State Department of Labor to identify future high needs areas in the state. Through this collaboration, SUNY identified occupations within the industries and clusters of industries important to New York as a whole and to specific regional economies. Occupations are considered high need if they are projected to have a large number of total openings, a high growth rate, or a combination of a significant number of total openings and positive growth. The six statewide high needs areas that SUNY will support with this RFP are: **Engineering-Engineering Technologies, Healthcare, Renewable-Clean Energy, Biomedical-Biotechnical, Agriculture-Agriculture Business, and Information Technology** (see Appendix A: Table 1).

- Engineering-Engineering Technologies

  Data from the NYS Department of Labor predicts that New York will need approximately 2,340 engineers and engineering technologists per year to meet the needs of the State's industries. SUNY has allocated almost $7 million over the last 5 years to relevant high needs in these program areas. Enrollment in state-operated baccalaureate programs in engineering and engineering technology increased by over 1,500 students since Fall 2006. With support from this initiative, Stony Brook added a Chemical/Molecular baccalaureate program and Binghamton developed a freshman Engineering program that raised its first-year retention rate from 86% to 93%.

  Within the area of engineering-engineering technologies, the top six occupations that NYS DOL has identified as a high need occupation for the New York are civil engineers, environmental engineers, electrical and electronic engineering technicians, electrical engineers, industrial engineers, and mechanical engineers. Many SUNY campuses already offer Associate's, Bachelor's, Master's and/or Doctoral degrees for these types of occupations.

- Health care

  Data from the NYS Department of Labor predicts that New York will need approximately 15,660 new healthcare practitioners and health technicians per year to meet the needs of the State's health care system. Over $16 million has been allocated, in the existing high needs programs since Fall 2006, to increase the number of nursing and medical technology students across the State University. Even with the high costs

related to these programs, and the closure of the New Paltz Nursing program, overall these programs added over 2,000 students over the last five years.

While NYS DOL reports that more than twice as many nurses are minted each year as are needed, the dearth appears to be in higher degree levels of nursing.   Specific occupations that are in the high needs field of health care include registered nurses, medical assistants, occupational therapists, physical therapists, physical therapy assistants, and surgical technologists. The NYSDOL also suggests increasing program availability to medical and clinical laboratory technologies/technicians (included in biomedical-biotechnology).

- Renewable Clean Energy

According to research firm Global Insight, more the 4.2 million green jobs could be created nation-wide between now and 2038. Green jobs are broadly defined as work tied to renewable energy and energy efficiency. NYSDOL cautions though that most green jobs will not be new or emerging jobs but existing jobs with an added green component, so existing program modification is most likely sufficient to address this high need area.

Within the area of renewable-clean energy, the top five occupations that NYS DOL has identified as a high need occupation for New York are civil engineers, environmental engineers, electrical and electronics engineering technicians, heating, air conditioning, and refrigeration mechanics and installers, and mechanical engineers. SUNY programs related to these occupations range from a certificate and/or associate's degree in electrical and electronics engineering technicians, heating, air conditioning, and refrigeration mechanics/installers, to a master's degree and/or doctoral degree in civil engineering or mechanical engineering.

- Biomedical-Biotechnical

SUNY has over 200 biomedical-biotechnical academic programs at all postsecondary levels. Nineteen programs have been added in the last few years and another ten are planned for introduction, including new dual programs in Medicine/Nanoscale Engineering and Medicine/Nanoscale Sciences. The most recent biennial national survey of the biosciences industry by Battelle and the Biotechnology Industry Organization reports that New York State is in the top quintile for total bioscience industry employment and for the number of biosciences industry establishments. The employment prospects for biotech jobs in New York State are positive.

Although SUNY seems to be producing enough chemists, biochemists and biophysicists to fulfill the New York State workforce demand, biochemists and biophysicists jobs are expected to grow nationally by 23.5% and New York has the fourth highest employment level biochemists and biophysicists in the country. Other high needs occupations within the area of biomedical-biotechnical include biological technicians, chemical technicians, and medical/clinical laboratory technicians.

- Agriculture-Agriculture Business

  Data from the New York Department of Labor predicts the New York will need 800 new Farming, Fishing, and Forestry personnel per year to meet the needs of the State over the next ten years. In many regions of the State, agribusiness and food processing are significant rural employers. Occupations in the area of agriculture-agriculture business that are in the high needs area include environmental engineers, and environmental scientists and specialists.

- Information Technology

  Cloud computing, smartphones, tablets, and easily accessible software applications makes the information technology a fast–growing area. Information technology occupations are involved in the development, management, and maintenance of computers and software to manage information.

  Academic programs related to computer systems analysts, network and computer systems administrators, applications software developers, and systems software developers would align well. Academic programs at SUNY related to information technology range from undergraduate certificates to degrees at the doctorate level.

Note: Campuses may submit a proposal related to an occupation not listed in Table 1 provided that the occupation is still within one of the six high needs areas. Detailed justification for including this occupation must be included in the proposal. Please contact Lisa Montiel (lisa.montiel@suny.edu) with any questions.

Guidelines for fiscal year 2013-14 refocus both High Needs Programs to support campus efforts to expand or start-up academic programs in high need areas as defined above. The program funding is competitive and limited to 1-3 years of support, again for new program development or program expansion. Campus proposals must demonstrate how the program will become self-sustaining after the High Needs funding ends.

IV.   2013-14 Proposal Submission Guidelines

Every SUNY college and university, including those currently receiving High Needs funding, is eligible to apply. Interested campuses must submit a proposal following the guidelines below. The number and amount of awards given as part of this competitive process will depend on the quantity, quality, and scope of the applications received. In previous years, High Needs award amounts varied greatly from $35,000 to over $400,000.

- The application cover page must include: campus name, detailed contact information, a proposal title stating the high needs area addressed, and the amount of funding requested.

- The body of the proposal must include the following five sections, each from one to three pages in length:

  1. Objectives - This section should include an outline of the broad and specific objectives for which funding is requested.

2. Need - This section should demonstrate the local/regional/state need for the new or expanded program. This section may include information on current or projected local industries, economic development, partnerships, student recruitment/enrollment, or other local labor information.

3. Impact - Describe how the impact of the new or expanded program will be measured and assessed. Provide an overview of the expected impact on the campus and the community (number of students served, expectations of post graduate employment, multiplier effect).

4. Sustainability - Describe the plans for sustaining the new/expanded program beyond the high needs funding period into the budget allocation period that will provide on-going support consistent with nationally normed cost structures. Beyond faculty salary, other items to address are the physical capacity of the campus to operate the program, the costs to maintain equipment, and replacement of supplies.

5. *Budget*. The final section will be a detailed annual budget for the entire funding period requested (1-3 years).

Please submit proposals via e-mail to highneeds@suny.edu by the application deadline of February 15, 2013.

Questions about this memorandum may be directed to Dr. Robert Kraushaar, Associate Provost, at robert.kraushaar@suny.edu or Dr. Lisa Montiel, Strategic Enrollment Planning Analyst, at: lisa.montiel@suny.edu.

V.   Evaluation Process

Each application will be reviewed by a 12 member evaluation committee consisting of one president, one chief academic officer and one chief business officer from each of four college sectors (doctoral degree granting institutions, comprehensive colleges, technology colleges and community colleges). Applications will be ranked according to the criteria set forth in the Application Guidelines above, based on that ranking, funding recommendations will be made to SUNY's Executive Vice Chancellor and Provost.

The review committee's evaluation of funding proposals will focus both on the prospects for maintaining or enhancing a program's academic quality as well as its impact on the workforce needs of the region and/or state. Other evaluation criteria will include the campus' commitment to the targeted program, to the extent that it assures sustainability of the effort beyond the funding period, and the measurability of proposed outcomes. The availability of matching funds or other institutional financial support for a proposal will be viewed favorably, but is not a prerequisite for receiving an award. These funds will not be awarded pursuant to any financial, demographic, political, or geographic formula.

VI. Reporting

At the conclusion of the first year for high needs funding is received, the campus will submit a report containing, as appropriate:

- a data section describing the profile of students who have applied, been accepted, and enrolled in the high needs program, including appropriate comparison data from previous cohorts;

- a description of the number and quality of faculty hired to support enrollment;

- a description of the equipment purchased in support of the program;

- a description of related facilities planning/construction—e.g., Laboratory and Library facilities

- a narrative section describing how the funds improved the campus' ability to meet workforce needs of the region and/or state.

Second and third year funding, if applied for, is contingent on achieving first year milestones and performance targets.

At the conclusion of the second and third years of funding, the campus will submit a brief report that describes the progress of this cohort of students, including career information.

Table 1: High Needs Areas & the Occupations Requiring Postsecondary Education and SUNY Degrees				
High Needs Area	**Occupation**	**SUNY Degree Levels**	**SUNY Degrees Conferred 2010-2011**	**NYS Projected 2010-2020 Annual Average Openings**
Engineering - Engineering Tech	Civil Engineers	Bachelor's, Master's, Doctoral	78	410
	Electrical & Electronics Engineering Technicians	Certificate, Associate's, Bachelor's	143	160
	Electrical Engineers	Bachelor's, Master's, Doctoral	142	230
	Environmental Engineers	Bachelor's, Master's	8	110
	Industrial Engineers	Bachelor's, Master's, Doctoral	78	160
	Mechanical Engineers	Bachelor's, Master's, Doctoral	131	340
Healthcare	Medical Assistants	Certificate, Associate's	156	850
	Occupational Therapists	Bachelor's, Master's, Doctoral	111	310
	Physical Therapists	Bachelor's, Master's, Doctoral	88	600
	Physical Therapy Assistants/Aides	Certificate, Associate's	171	290
	Registered Nurses	Associates, Bachelor's, Master's, Doctoral, Adv Cert	3,850	5,720
	Surgical Technology/Technologists	Certificate, Associate's	85	190
Renewable - Clean Energy	Civil Engineers	Bachelor's, Master's, Doctoral	78	410
	Electrical & Electronics Engineering Technicians	Certificate, Associate's, Bachelor's	143	160
	Environmental Engineers	Bachelor's, Master's	8	110
	Heating, Air Conditioning, & Refrigeration Mechanics & Installers	Certificate, Associate's	157	540
	Mechanical Engineers	Bachelor's, Master's, Doctoral	131	340
Biomedical - Biotechnical	Biological Technicians	Associate's	29	130
	Chemical Technicians	Certificate, Associate's, Bachelor's	21	60
	Medical & Clinical Laboratory Technicians	Associate's	91	160
Agriculture - Ag Business	Environmental Engineers	Bachelor's, Master's	8	110
	Environmental Scientists & Specialists, Including Health	Bachelor's, Master's, Doctoral	19	80
Information Technology	Computer Systems Analysts	Associate's, Bachelor's, Master's, Doctoral	145	1,130
	Network & Computer Systems Administrators	Associate's, Bachelor's, Master's, Doctoral	399	770
	Software Developers, Applications	Associate's, Bachelor's, Master's, Doctoral	56	1,010
	Software Developers, Systems Software	Associate's, Bachelor's, Master's, Doctoral	179	700

---

[1] Note: Campuses may submit a proposal related to an occupation not listed in Table 1 provided that the occupation is still within one of the six high needs areas. Detailed justification for including this occupation must be included in the proposal. Please contact Lisa Montiel (lisa.montiel@suny.edu) with any questions.

Appendix B

Table 2: Regions and High Needs Areas Identified by NYDOL (highlighed areas are those included in RFP)										
High Need Area	Capital District	Central NY	Finger Lakes	Hudson Valley	Long Island	Mohawk Valley	NYC	North Country	Southern Tier	WNY
Engineering - Engineering Tech	X	X	X	X	X	X		X	X	X
Healthcare	X	X	X	X	X	X	X	X	X	X
Renewable - Clean Energy	X	X			X	X	X		X	X
Biomedical - Biotechnical	X	X	X	X	X	X		X		X
Agriculture - Ag Business	X					X			X	X
Information Technology			X	X	X					
Skilled Construction	X	X	X			X				X
Advanced Manufacturing		X			X					X
STEM occupations		X			X			X		
Nanotechnology	X					X				
Logistics							X			X
Leisure & Hospitality								X		
Green Construction		X								
Green Research, Design, and Con		X								
Environment Protection		X								
Nuclear Power Plant Related		X								
Optics			X							
Cybersecurity						X				
Next Generation Transportation									X	
Natural Gas Extraction									X	