

Public Law 102-476  
102d Congress

An Act

To establish a national advanced technician training program, utilizing the resources of the Nation's two-year associate-degree-granting colleges to expand the pool of skilled technicians in strategic advanced-technology fields, to increase the productivity of the Nation's industries, and to improve the competitiveness of the United States in international trade, and for other purposes.

Oct. 23, 1992

[S. 1146]

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,*

**SECTION 1. SHORT TITLE.**

This Act may be cited as the "Scientific and Advanced-Technology Act of 1992".

Scientific and  
Advanced-  
Technology Act  
of 1992.  
42 USC 1861  
note.

**SEC. 2. FINDINGS AND PURPOSES.**

42 USC 1862h.

(a) **FINDINGS.**—The Congress finds that—

(1) the position of the United States in the world economy faces great challenges from highly trained foreign competition;

(2) the workforce of the United States must be better prepared for the technologically advanced, competitive, global economy;

(3) the improvement of our work force's productivity and our international economic position depend upon the strengthening of our educational efforts in science, mathematics, and technology, especially at the associate-degree level;

(4) shortages of scientifically and technically trained workers in a wide variety of fields will best be addressed by collaboration among the Nation's associate-degree-granting colleges and private industry to produce skilled, advanced technicians; and

(5) the National Science Foundation's traditional role in developing model curricula, disseminating instructional materials, enhancing faculty development, and stimulating partnerships between educational institutions and industry, makes an enlarged role for the Foundation in scientific and technical education and training particularly appropriate.

(b) **PURPOSES.**—It is the purpose of this Act to—

(1) improve science and technical education at associate-degree-granting colleges;

(2) improve secondary school and postsecondary curricula in mathematics and science;

(3) improve the educational opportunities of postsecondary students by creating comprehensive articulation agreements and planning between 2-year and 4-year institutions; and

(4) promote outreach to secondary schools to improve mathematics and science instruction.

**SEC. 3. SCIENTIFIC AND TECHNICAL EDUCATION.**

(a) **NATIONAL ADVANCED SCIENTIFIC AND TECHNICAL EDUCATION PROGRAM.**—The Director of the National Science Foundation (hereafter in this Act referred to as the "Director") shall award grants

Grants.  
42 USC 1862i.

to associate-degree-granting colleges, and consortia thereof, to assist them in providing education in advanced-technology fields. The grant program shall place emphasis on the needs of students who have been in the workforce (including work in the home), and shall be designed to strengthen and expand the scientific and technical education and training capabilities of associate-degree-granting colleges through such methods as—

(1) the development of model instructional programs in advanced-technology fields;

(2) the professional development of faculty and instructors, both full- and part-time, in advanced-technology fields;

(3) the establishment of innovative partnership arrangements that—

(A) involve associate-degree-granting colleges and other appropriate public and private sector entities, and

(B) provide for private sector donations, faculty opportunities to have short-term assignments with industry, sharing of program costs, equipment loans, and the cooperative use of laboratories, plants, and other facilities, and provision for state-of-the-art work experience opportunities for students enrolled in such programs;

(4) the acquisition of state-of-the-art instrumentation essential to programs designed to prepare and upgrade students in scientific and advanced-technology fields; and

(5) the development and dissemination of instructional materials in support of improving the advanced scientific and technical education and training capabilities of associate-degree-granting colleges, including programs for students who are not pursuing a science degree.

(b) NATIONAL CENTERS OF SCIENTIFIC AND TECHNICAL EDUCATION.—The Director shall award grants for the establishment of centers of excellence, not to exceed 10 in number, among associate-degree-granting colleges. Centers shall meet one or both of the following criteria:

(1) Exceptional instructional programs in advanced-technology fields.

(2) Excellence in undergraduate education in mathematics and science.

The centers shall serve as national and regional clearinghouses and models for the benefit of both colleges and secondary schools, and shall provide seminars and programs to disseminate model curricula and model teaching methods and instructional materials to other associate-degree-granting colleges in the geographic region served by the center.

(c) ARTICULATION PARTNERSHIPS.—

(1) PARTNERSHIP GRANTS.—(A) The Director shall make grants to eligible partnerships to encourage students to pursue bachelor degrees in mathematics, science, engineering, or technology, and to assist students pursuing bachelor degrees in mathematics, science, engineering, or technology to make the transition from associate-degree-granting colleges to bachelor-degree-granting institutions, through such means as—

(i) examining curricula to ensure that academic credit earned at the associate-degree-granting college is transferable to bachelor-degree-granting institutions;

(ii) informing teachers from the associate-degree-granting college on the specific requirements of courses at the bachelor-degree-granting institution; and

(iii) providing summer educational programs for students from the associate-degree-granting college to encourage such students' subsequent matriculation at bachelor-degree-granting institutions.

(B) Each eligible partnership receiving a grant under this paragraph shall, at a minimum—

(i) counsel students, including students who have been in the workforce (including work in the home), about the requirements and course offerings of the bachelor-degree-granting institution; and

(ii) conduct workshops and orientation sessions to ensure that students are familiar with programs, including laboratories and financial aid programs, at the bachelor-degree-granting institution.

Funds used by eligible partnerships to carry out clauses (i) and (ii) shall be from non-Federal sources. In-cash and in-kind resources used by eligible partnerships to carry out clauses (i) and (ii) shall not be considered to be contributions for purposes of applying subsection (f)(3).

(C) Any institution participating in a partnership that receives a grant under this paragraph shall be ineligible to receive assistance under part B of title I of the Higher Education Act of 1965 for the duration of the grant received under this paragraph.

(2) **OUTREACH GRANTS.**—The Director shall make grants to associate-degree-granting colleges with outstanding mathematics and science programs to strengthen relationships with secondary schools in the community served by the college by improving mathematics and science education and encouraging the interest and aptitude of secondary school students for careers in science and advanced-technology fields through such means as developing agreements with local educational agencies to enable students to satisfy entrance and course requirements at the associate-degree-granting college.

(d) **COORDINATION WITH OTHER FEDERAL DEPARTMENTS.**—In carrying out this section, the Director shall consult, cooperate, and coordinate, to enhance program effectiveness and to avoid duplication, with the programs and policies of other relevant Federal agencies. In carrying out subsection (c), the Director shall coordinate activities with programs receiving assistance under part B of title I of the Higher Education Act of 1965.

(e) **LIMITATION ON FUNDING.**—To qualify for a grant under this section, an associate-degree-granting college, or consortium thereof, shall provide assurances adequate to the Director that it will not decrease its level of spending of funds from non-Federal sources on advanced scientific and technical education and training programs.

(f) **FUNCTIONS OF THE DIRECTOR.**—In carrying out this Act, the Director shall—

(1) award grants on a competitive, merit basis;

(2) ensure an equitable geographic distribution of grant awards;

(3) ensure that an applicant for a grant awarded under subsection (a), (b), or (c)(1) will make an in-cash or in-kind

contribution in an amount equal to at least 25 percent of the cost of the program, and for a grant awarded under subsection (c)(2) will make an in-cash or in-kind contribution in an amount at least equal to the amount of the grant award;

(4) establish and maintain a readily accessible inventory of the programs assisted under this Act; and

(5) designate an officer of the National Science Foundation to serve as a liaison with associate-degree-granting institutions for the purpose of enhancing the role of such institutions in the activities of the Foundation.

(g) DEFINITIONS.—As used in this section—

(1) the term “advanced-technology” includes advanced technical activities such as the modernization, miniaturization, integration, and computerization of electronic, hydraulic, pneumatic, laser, nuclear, chemical, telecommunication, fiber optic, robotic, and other technological applications to enhance productivity improvements in manufacturing, communication, transportation, commercial, and similar economic and national security activities;

(2) the term “associate-degree-granting college” means an institution of higher education (as determined under section 1201(a) of the Higher Education Act of 1965 (20 U.S.C. 1141(a))) that—

(A) is a nonprofit institution that offers a 2-year associate-degree program or a 2-year certificate program; or

(B) is a proprietary institution that offers a 2-year associate-degree program;

(3) the term “bachelor-degree-granting institution” means an institution of higher education (as determined under section 1201(a) of the Higher Education Act of 1965 (20 U.S.C. 1141(a))) that offers a baccalaureate degree program;

(4) the term “eligible partnership” means one or more associate-degree-granting colleges in partnership with one or more separate bachelor-degree-granting institutions; and

(5) the term “local educational agency” has the meaning given such term in section 1471(12) of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 2891(12)).

#### SEC. 4. ADMINISTRATIVE AMENDMENT.

Section 3 of the National Science Foundation Act of 1950 (42 U.S.C. 1862) is amended by adding at the end the following new subsection:

“(g) In carrying out subsection (a)(4), the Foundation is authorized to foster and support access by the research and education communities to computer networks which may be used substantially for purposes in addition to research and education in the sciences and engineering, if the additional uses will tend to increase the overall capabilities of the networks to support such research and education activities.”.

**SEC. 5. AUTHORIZATION OF APPROPRIATIONS.**

42 USC 1862j.

There are authorized to be appropriated, from sums otherwise authorized to be appropriated, to the Director for carrying out this Act—

- (1) \$35,000,000 for fiscal year 1992; and
- (2) \$35,000,000 for fiscal year 1993.

Approved October 23, 1992.

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**LEGISLATIVE HISTORY—S. 1146:****CONGRESSIONAL RECORD, Vol. 138 (1992):**

Oct. 2, considered and passed Senate.

Oct. 3, considered and passed House.