

111TH CONGRESS
1ST SESSION

H. R. 461

To authorize the National Science Foundation to award grants to institutions of higher education to develop and offer education and training programs.

IN THE HOUSE OF REPRESENTATIVES

JANUARY 13, 2009

Mr. WU (for himself, Mr. GORDON of Tennessee, Ms. EDDIE BERNICE JOHNSON of Texas, Mr. LANGEVIN, Mr. BILBRAY, Ms. RICHARDSON, Ms. SCHWARTZ, Mr. MILLER of North Carolina, Mr. BOUCHER, Mr. BLUMENAUER, Mr. ROTHMAN of New Jersey, Mr. SENSENBRENNER, Mr. SMITH of Nebraska, and Mr. HALL of Texas) introduced the following bill; which was referred to the Committee on Science and Technology

A BILL

To authorize the National Science Foundation to award grants to institutions of higher education to develop and offer education and training programs.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “10,000 Trained by
5 2010 Act”.

6 **SEC. 2. FINDINGS.**

7 The Congress finds that—

1 (1) the National Science Foundation has long
2 been a government leader in strengthening our Na-
3 tion's information infrastructure;

4 (2) as automation and digitization reach the
5 healthcare industry, that industry will need to draw
6 heavily on the expertise of researchers funded by the
7 National Science Foundation for the collection, proc-
8 essing, and utilization of information;

9 (3) the National Science Foundation's basic re-
10 search, demonstrations, and curriculum development
11 assistance are all required to help make sure the in-
12 dustry has the knowledge, procedures, and workforce
13 necessary to take full advantage of advanced com-
14 munications and information technology;

15 (4) the Bureau of Labor Statistics estimated
16 that 136,000 Americans were employed in 2000 as
17 information management professionals in the
18 healthcare industry alone, with projected growth of
19 49 percent by 2010; and

20 (5) no systematic plan exists for designing and
21 implementing systems and information tools and for
22 ensuring that the healthcare workforce can make the
23 transition to the information age.

24 **SEC. 3. DEFINITIONS.**

25 In this Act:

1 (1) DIRECTOR.—The term “Director” means
2 the Director of the National Science Foundation.

3 (2) INFORMATION.—The term “information”
4 means healthcare information.

5 (3) INSTITUTION OF HIGHER EDUCATION.—The
6 term “institution of higher education” has the
7 meaning given that term in section 101 of the High-
8 er Education Act of 1965 (20 U.S.C. 1001).

9 **SEC. 4. NATIONAL SCIENCE FOUNDATION RESEARCH.**

10 (a) GRANTS.—

11 (1) IN GENERAL.—The Director, in consulta-
12 tion with the heads of other Federal agencies as ap-
13 propriate, shall award grants for basic research on
14 innovative approaches to improve information sys-
15 tems. Research areas may include—

16 (A) information studies;

17 (B) population informatics;

18 (C) translational informatics; and

19 (D) data security, integrity, and confiden-
20 tiality.

21 (2) MERIT REVIEW; COMPETITION.—Grants
22 shall be awarded under this section on a merit-re-
23 viewed, competitive basis.

24 (3) AUTHORIZATION OF APPROPRIATIONS.—

25 There are authorized to be appropriated to the Na-

1 tional Science Foundation to carry out this sub-
2 section—

3 (A) \$3,500,000 for fiscal year 2010;

4 (B) \$3,600,000 for fiscal year 2011;

5 (C) \$3,700,000 for fiscal year 2012; and

6 (D) \$3,800,000 for fiscal year 2013.

7 (b) INFORMATICS RESEARCH CENTERS.—

8 (1) IN GENERAL.—The Director, in consulta-
9 tion with the heads of other Federal agencies as ap-
10 propriate, shall award multiyear grants, subject to
11 the availability of appropriations, to institutions of
12 higher education (or consortia thereof) to establish
13 multidisciplinary Centers for Informatics Research.
14 Institutions of higher education (or consortia there-
15 of) receiving such grants may partner with one or
16 more government laboratories, for-profit institutions,
17 or non-profit institutions.

18 (2) MERIT REVIEW; COMPETITION.—Grants
19 shall be awarded under this subsection on a merit-
20 reviewed, competitive basis.

21 (3) PURPOSE.—The purpose of the Centers
22 shall be to generate innovative approaches in infor-
23 mation by conducting cutting-edge, multidisciplinary
24 research, including in the research areas described in
25 subsection (a)(1).

1 (4) APPLICATIONS.—An institution of higher
2 education (or a consortium thereof) seeking funding
3 under this subsection shall submit an application to
4 the Director at such time, in such manner, and con-
5 taining such information as the Director may re-
6 quire. The application shall include, at a minimum,
7 a description of—

8 (A) the research projects that will be un-
9 dertaken by the Center and the contributions of
10 each of the participating entities;

11 (B) how the Center will promote active col-
12 laboration among professionals from different
13 disciplines, such as information technology spe-
14 cialists, health professionals, administrators,
15 and social science researchers; and

16 (C) how the Center will contribute to in-
17 creasing the number of information researchers
18 and other professionals.

19 (5) CRITERIA.—In evaluating the applications
20 submitted under paragraph (4), the Director shall
21 consider, at a minimum—

22 (A) the ability of the applicant to generate
23 innovative approaches to information and effec-
24 tively carry out the research program;

(B) the experience of the applicant in conducting research in the information field, and the capacity of the applicant to foster new multidisciplinary collaborations;

(C) the capacity of the applicant to attract and provide adequate support for undergraduate and graduate students to pursue information research; and

(D) the extent to which the applicant will partner with government laboratories or for-profit or non-profit entities, and the role the government laboratories or for-profit or non-profit entities will play in the research undertaken by the Center.

(6) ANNUAL MEETING.—The Director shall convene an annual meeting of the Centers in order to foster collaboration and communication between Center participants.

(7) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated for the National Science Foundation to carry out this subsection—

(A) \$4,500,000 for fiscal year 2010;

(B) \$4,600,000 for fiscal year 2011;

(C) \$4,700,000 for fiscal year 2012; and

1 (D) \$4,800,000 for fiscal year 2013.

2 **SEC. 5. NATIONAL SCIENCE FOUNDATION INFORMATION**
3 **PROGRAMS.**

4 (a) CAPACITY BUILDING GRANTS.—

5 (1) IN GENERAL.—The Director, in consulta-
6 tion with the heads of other Federal agencies as ap-
7 propriate, shall establish a program to award grants
8 to institutions of higher education (or consortia
9 thereof) to establish or improve undergraduate and
10 master's degree information programs, to increase
11 the number of students who pursue undergraduate
12 or master's degrees in information fields, to provide
13 students with experience in government or industry
14 related to their information studies, and, to the ex-
15 tent practicable, to do so using distance learning.

16 (2) MERIT REVIEW; COMPETITION.—Grants
17 shall be awarded under this subsection on a merit-
18 reviewed, competitive basis.

19 (3) USE OF FUNDS.—Grants awarded under
20 this subsection shall be used for activities that en-
21 hance the ability of an institution of higher edu-
22 cation (or consortium thereof) to provide high-qual-
23 ity information education, including certification and
24 undergraduate and master's degree programs, and

1 to recruit and retain increased numbers of students
2 to such programs. Activities may include—

3 (A) developing and revising curriculum to
4 better prepare undergraduate and master's de-
5 gree students for careers in the information
6 field;

7 (B) establishing degree and certificate pro-
8 grams in the information field;

9 (C) creating opportunities in information
10 research for undergraduate students;

11 (D) acquiring equipment necessary for stu-
12 dent instruction in these programs, including
13 the installation of testbed networks for student
14 use;

15 (E) providing opportunities for faculty to
16 work with State, local, or Federal Government
17 agencies, private industry, and other academic
18 institutions to develop new expertise or to for-
19 mulate new information research directions;

20 (F) establishing collaborations with other
21 academic institutions or departments that seek
22 to establish, expand, or enhance these pro-
23 grams;

24 (G) establishing student internships for
25 students in these programs at State, local, and

1 Federal Government agencies or in private in-
2 dustry;

3 (H) establishing or enhancing bridge pro-
4 grams in information fields between community
5 colleges and universities; and

6 (I) any other activities the Director, in
7 consultation with the heads of other Federal
8 agencies as appropriate, determines will achieve
9 the purposes described in paragraph (1).

10 (4) SELECTION PROCESS.—

11 (A) APPLICATION.—An institution of high-
12 er education (or a consortium thereof) seeking
13 funding under this subsection shall submit an
14 application to the Director at such time, in such
15 manner, and with such contents as the Director
16 may require. The application shall include, at a
17 minimum—

18 (i) a description of the applicant's rel-
19 evant research and instructional capacity,
20 and in the case of an application from a
21 consortium of institutions of higher edu-
22 cation, a description of the role that each
23 member will play in implementing the pro-
24 posal;

1 (ii) a comprehensive plan by which the
2 institution or consortium will build instruc-
3 tional capacity in information fields;

4 (iii) a description of relevant collabo-
5 rations with State, local, or Federal Gov-
6 ernment agencies or private industry that
7 inform the instructional program;

8 (iv) a survey of the applicant's his-
9 toric student enrollment and placement
10 data and a study of potential enrollment
11 and placement for students enrolled in the
12 proposed program; and

13 (v) a plan to evaluate the success of
14 the proposed program, including post-
15 graduate assessment of graduate school
16 and job placement and retention rates as
17 well as the relevance of the instructional
18 program to graduate study and to the
19 workplace.

20 (B) AWARDS.—The Director shall ensure,
21 to the extent practicable, that grants are
22 awarded under this subsection in a wide range
23 of geographic areas and categories of institu-
24 tions of higher education.

1 (5) ASSESSMENT REQUIRED.—The Director, in
2 consultation with the heads of other Federal agen-
3 cies as appropriate, shall evaluate the program es-
4 tablished under this subsection no later than 3 years
5 after the establishment of the program. At a min-
6 imum, the Director shall evaluate the extent to
7 which the grants have achieved their objectives of in-
8 creasing the quality and quantity of students pur-
9 suing undergraduate or master’s degrees in informa-
10 tion fields. The Director shall make this assessment
11 publicly available.

12 (6) AUTHORIZATION OF APPROPRIATIONS.—
13 There are authorized to be appropriated to the Na-
14 tional Science Foundation to carry out this sub-
15 section—

- 16 (A) \$9,000,000 for fiscal year 2010;
17 (B) \$9,200,000 for fiscal year 2011;
18 (C) \$9,400,000 for fiscal year 2012; and
19 (D) \$9,600,000 for fiscal year 2013.

20 (b) SCIENTIFIC AND ADVANCED TECHNOLOGY ACT
21 OF 1992.—

22 (1) GRANTS.—The Director shall provide
23 grants under the Scientific and Advanced Tech-
24 nology Act of 1992 for the purposes of section 3(a)
25 and (b) of that Act, except that the activities sup-

1 ported pursuant to this subsection shall be limited to
2 improving education in fields related to information.

3 (2) AUTHORIZATION OF APPROPRIATIONS.—

4 There are authorized to be appropriated to the Na-
5 tional Science Foundation to carry out this sub-
6 section—

7 (A) \$7,000,000 for fiscal year 2010;

8 (B) \$7,200,000 for fiscal year 2011;

9 (C) \$7,400,000 for fiscal year 2012; and

10 (D) \$7,600,000 for fiscal year 2013.

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