

Union Calendar No. 104

110TH CONGRESS
1ST SESSION

H. R. 1467

[Report No. 110-172]

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

MARCH 9, 2007

Mr. WU (for himself, Mr. HALL of Texas, Mr. GORDON of Tennessee, and Mr. GINGREY) introduced the following bill; which was referred to the Committee on Science and Technology

JUNE 5, 2007

Additional sponsors: Mr. MILLER of North Carolina, Mr. LANGEVIN, Mr. LATHAM, and Ms. EDDIE BERNICE JOHNSON of Texas

JUNE 5, 2007

Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

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,*

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “10,000 Trained by
3 2010 Act”.

4 **SEC. 2. FINDINGS.**

5 The Congress finds that—

6 (1) the National Science Foundation has long
7 been a government leader in strengthening our Na-
8 tion’s information infrastructure;

9 (2) as automation and digitization reach the
10 healthcare industry, that industry will need to draw
11 heavily on the expertise of researchers funded by the
12 National Science Foundation for the collection, proc-
13 essing, and utilization of information;

14 (3) the National Science Foundation’s basic re-
15 search, demonstrations, and curriculum development
16 assistance are all required to help make sure the in-
17 dustry has the knowledge, procedures, and workforce
18 necessary to take full advantage of advanced com-
19 munications and information technology;

20 (4) the Bureau of Labor Statistics estimated
21 that 136,000 Americans were employed in 2000 as
22 information management professionals in the
23 healthcare industry alone, with projected growth of
24 49 percent by 2010; and

25 (5) no systematic plan exists for designing and
26 implementing systems and information tools and for

1 ensuring that the healthcare workforce can make the
2 transition to the information age.

3 **SEC. 3. DEFINITIONS.**

4 In this Act:

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

7 (2) INFORMATION.—The term “information”
8 means healthcare information.

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

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

14 (a) GRANTS.—

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

20 (A) information studies;

21 (B) population informatics;

22 (C) translational informatics; and

23 (D) data security, integrity, and confiden-
24 tiality.

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

4 (3) AUTHORIZATION OF APPROPRIATIONS.—
5 There are authorized to be appropriated to the Na-
6 tional Science Foundation to carry out this sub-
7 section—

8 (A) \$3,500,000 for fiscal year 2008;

9 (B) \$3,600,000 for fiscal year 2009;

10 (C) \$3,700,000 for fiscal year 2010; and

11 (D) \$3,800,000 for fiscal year 2011.

12 (b) INFORMATICS RESEARCH CENTERS.—

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

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

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

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

13 (A) the research projects that will be un-
14 dertaken by the Center and the contributions of
15 each of the participating entities;

16 (B) how the Center will promote active col-
17 laboration among professionals from different
18 disciplines, such as information technology spe-
19 cialists, health professionals, administrators,
20 and social science researchers; and

21 (C) how the Center will contribute to in-
22 creasing the number of information researchers
23 and other professionals.

1 (5) CRITERIA.—In evaluating the applications
2 submitted under paragraph (4), the Director shall
3 consider, at a minimum—

4 (A) the ability of the applicant to generate
5 innovative approaches to information and effec-
6 tively carry out the research program;

7 (B) the experience of the applicant in con-
8 ducting research in the information field, and
9 the capacity of the applicant to foster new mul-
10 tidisciplinary collaborations;

11 (C) the capacity of the applicant to attract
12 and provide adequate support for under-
13 graduate and graduate students to pursue in-
14 formation research; and

15 (D) the extent to which the applicant will
16 partner with government laboratories or for-
17 profit or non-profit entities, and the role the
18 government laboratories or for-profit or non-
19 profit entities will play in the research under-
20 taken by the Center.

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

1 (7) AUTHORIZATION OF APPROPRIATIONS.—

2 There are authorized to be appropriated for the Na-
3 tional Science Foundation to carry out this sub-
4 section—

5 (A) \$4,500,000 for fiscal year 2008;

6 (B) \$4,600,000 for fiscal year 2009;

7 (C) \$4,700,000 for fiscal year 2010; and

8 (D) \$4,800,000 for fiscal year 2011.

9 **SEC. 5. NATIONAL SCIENCE FOUNDATION INFORMATION**
10 **PROGRAMS.**

11 (a) CAPACITY BUILDING GRANTS.—

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

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

1 (3) USE OF FUNDS.—Grants awarded under
2 this subsection shall be used for activities that en-
3 hance the ability of an institution of higher edu-
4 cation (or consortium thereof) to provide high-quality
5 information education, including certification and
6 undergraduate and master’s degree programs, and
7 to recruit and retain increased numbers of students
8 to such programs. Activities may include—

9 (A) developing and revising curriculum to
10 better prepare undergraduate and master’s de-
11 gree students for careers in the information
12 field;

13 (B) establishing degree and certificate pro-
14 grams in the information field;

15 (C) creating opportunities in information
16 research for undergraduate students;

17 (D) acquiring equipment necessary for stu-
18 dent instruction in these programs, including
19 the installation of testbed networks for student
20 use;

21 (E) providing opportunities for faculty to
22 work with State, local, or Federal Government
23 agencies, private industry, and other academic
24 institutions to develop new expertise or to for-
25 mulate new information research directions;

1 (F) establishing collaborations with other
2 academic institutions or departments that seek
3 to establish, expand, or enhance these pro-
4 grams;

5 (G) establishing student internships for
6 students in these programs at State, local, and
7 Federal Government agencies or in private in-
8 dustry;

9 (H) establishing or enhancing bridge pro-
10 grams in information fields between community
11 colleges and universities; and

12 (I) any other activities the Director, in
13 consultation with the heads of other Federal
14 agencies as appropriate, determines will achieve
15 the purposes described in paragraph (1).

16 (4) SELECTION PROCESS.—

17 (A) APPLICATION.—An institution of high-
18 er education (or a consortium thereof) seeking
19 funding under this subsection shall submit an
20 application to the Director at such time, in such
21 manner, and with such contents as the Director
22 may require. The application shall include, at a
23 minimum—

24 (i) a description of the applicant's rel-
25 evant research and instructional capacity,

1 and in the case of an application from a
2 consortium of institutions of higher edu-
3 cation, a description of the role that each
4 member will play in implementing the pro-
5 posal;

6 (ii) a comprehensive plan by which the
7 institution or consortium will build instruc-
8 tional capacity in information fields;

9 (iii) a description of relevant collabo-
10 rations with State, local, or Federal Gov-
11 ernment agencies or private industry that
12 inform the instructional program;

13 (iv) a survey of the applicant's his-
14 toric student enrollment and placement
15 data and a study of potential enrollment
16 and placement for students enrolled in the
17 proposed program; and

18 (v) a plan to evaluate the success of
19 the proposed program, including post-
20 graduate assessment of graduate school
21 and job placement and retention rates as
22 well as the relevance of the instructional
23 program to graduate study and to the
24 workplace.

1 (B) AWARDS.—The Director shall ensure,
2 to the extent practicable, that grants are
3 awarded under this subsection in a wide range
4 of geographic areas and categories of institu-
5 tions of higher education.

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

17 (6) AUTHORIZATION OF APPROPRIATIONS.—
18 There are authorized to be appropriated to the Na-
19 tional Science Foundation to carry out this sub-
20 section—

- 21 (A) \$9,000,000 for fiscal year 2008;
22 (B) \$9,200,000 for fiscal year 2009;
23 (C) \$9,400,000 for fiscal year 2010; and
24 (D) \$9,600,000 for fiscal year 2011.

1 (b) SCIENTIFIC AND ADVANCED TECHNOLOGY ACT
2 OF 1992.—

3 (1) GRANTS.—The Director shall provide
4 grants under the Scientific and Advanced Tech-
5 nology Act of 1992 for the purposes of section 3(a)
6 and (b) of that Act, except that the activities sup-
7 ported pursuant to this subsection shall be limited to
8 improving education in fields related to information.

9 (2) AUTHORIZATION OF APPROPRIATIONS.—
10 There are authorized to be appropriated to the Na-
11 tional Science Foundation to carry out this sub-
12 section—

- 13 (A) \$7,000,000 for fiscal year 2008;
14 (B) \$7,200,000 for fiscal year 2009;
15 (C) \$7,400,000 for fiscal year 2010; and
16 (D) \$7,600,000 for fiscal year 2011.

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