

109<sup>TH</sup> CONGRESS  
2<sup>D</sup> SESSION

# H. R. 5605

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

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IN THE HOUSE OF REPRESENTATIVES

JUNE 14, 2006

Mr. WU (for himself and Mr. HALL) introduced the following bill; which was referred to the Committee on Science

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## 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—

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

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

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

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

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

21 **SEC. 3. DEFINITIONS.**

22 In this Act:

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

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

3           (3) INSTITUTION OF HIGHER EDUCATION.—The  
4 term “institution of higher education” has the  
5 meaning give that term in section 101 of the Higher  
6 Education Act of 1965 (20 U.S.C. 1001).

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

8           (a) GRANTS.—

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

14                   (A) information studies;

15                   (B) population informatics;

16                   (C) translational informatics; and

17                   (D) data security, integrity, and confiden-  
18 tiality.

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

22           (3) AUTHORIZATION OF APPROPRIATIONS.—  
23 There are authorized to be appropriated to the Na-  
24 tional Science Foundation to carry out this sub-  
25 section—

- 1 (A) \$3,500,000 for fiscal year 2007;  
2 (B) \$3,600,000 for fiscal year 2008;  
3 (C) \$3,700,000 for fiscal year 2009; and  
4 (D) \$3,800,000 for fiscal year 2010.

5 (b) INFORMATICS RESEARCH CENTERS.—

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

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

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

24 (4) APPLICATIONS.—An institution of higher  
25 education (or a consortium thereof) seeking funding

1 under this subsection shall submit an application to  
2 the Director at such time, in such manner, and con-  
3 taining such information as the Director may re-  
4 quire. The application shall include, at a minimum,  
5 a description of—

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

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

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

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

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

23 (B) the experience of the applicant in con-  
24 ducting research in the information field, and

1 the capacity of the applicant to foster new mul-  
2 tidisciplinary collaborations;

3 (C) the capacity of the applicant to attract  
4 and provide adequate support for under-  
5 graduate and graduate students to pursue in-  
6 formation research; and

7 (D) the extent to which the applicant will  
8 partner with government laboratories or for-  
9 profit or non-profit entities, and the role the  
10 government laboratories or for-profit or non-  
11 profit entities will play in the research under-  
12 taken by the Center.

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

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

21 (A) \$4,500,000 for fiscal year 2007;

22 (B) \$4,600,000 for fiscal year 2008;

23 (C) \$4,700,000 for fiscal year 2009; and

24 (D) \$4,800,000 for fiscal year 2010.

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

3 (a) **CAPACITY BUILDING GRANTS.—**

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

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

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

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

5 (B) establishing degree and certificate pro-  
6 grams in the information field;

7 (C) creating opportunities in information  
8 research for undergraduate students;

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

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

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

22 (G) establishing student internships for  
23 students in these programs at State, local, and  
24 Federal Government agencies or in private in-  
25 dustry;

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

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

8 (4) SELECTION PROCESS.—

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

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

23 (ii) a comprehensive plan by which the  
24 institution or consortium will build instruc-  
25 tional capacity in information fields;

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

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

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

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

22 (5) ASSESSMENT REQUIRED.—The Director, in  
23 consultation with the heads of other Federal agen-  
24 cies as appropriate, shall evaluate the program es-  
25 tablished under this subsection no later than 3 years

1 after the establishment of the program. At a min-  
2 imum, the Director shall evaluate the extent to  
3 which the grants have achieved their objectives of in-  
4 creasing the quality and quantity of students pur-  
5 suing undergraduate or master's degrees in informa-  
6 tion fields. The Director shall make this assessment  
7 publicly available.

8 (6) AUTHORIZATION OF APPROPRIATIONS.—

9 There are authorized to be appropriated to the Na-  
10 tional Science Foundation to carry out this sub-  
11 section—

12 (A) \$9,000,000 for fiscal year 2007;

13 (B) \$9,200,000 for fiscal year 2008;

14 (C) \$9,400,000 for fiscal year 2009; and

15 (D) \$9,600,000 for fiscal year 2010.

16 (b) SCIENTIFIC AND ADVANCED TECHNOLOGY ACT  
17 OF 1992.—

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

24 (2) 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) \$7,000,000 for fiscal year 2007;  
4 (B) \$7,200,000 for fiscal year 2008;  
5 (C) \$7,400,000 for fiscal year 2009; and  
6 (D) \$7,600,000 for fiscal year 2010.

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