

110TH CONGRESS
1ST SESSION

H. R. 4165

To provide grants to encourage and enhance the study of modeling and simulation at institutions of higher education.

IN THE HOUSE OF REPRESENTATIVES

NOVEMBER 13, 2007

Mr. SCOTT of Virginia (for himself, Mr. FORBES, Mr. ORTIZ, Mrs. DRAKE, and Mr. KELLER of Florida) introduced the following bill; which was referred to the Committee on Education and Labor

A BILL

To provide grants to encourage and enhance the study of modeling and simulation at institutions of higher education.

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. MODELING AND SIMULATION PROGRAMS.**

4 The Higher Education Act of 1965 (20 U.S.C. 1001
5 et seq.) is amended by adding at the end the following
6 new title:

7 **“TITLE VIII—ADDITIONAL**
8 **PROGRAMS**

9 **“SEC. 801. MODELING AND SIMULATION PROGRAMS.**

10 **“(a) PURPOSE; DEFINITION.—**

1 “(1) PURPOSE.—The purpose of this section is
2 to promote the study of modeling and simulation at
3 institutions of higher education, through the collabo-
4 ration with new and existing programs, and specifi-
5 cally to promote the use of technology in such study
6 through the creation of accurate models that can
7 simulate processes or recreate real life, by—

8 “(A) establishing a task force at the De-
9 partment of Education to raise awareness of
10 and define the study of modeling and simula-
11 tion;

12 “(B) provide grants to institutions of high-
13 er education to develop new modeling and sim-
14 ulation degree programs; and

15 “(C) create grants for institutions of high-
16 er education to enhance existing modeling and
17 simulation degree programs.

18 “(2) DEFINITION.—In this section, the term
19 ‘modeling and simulation’ means a field of study re-
20 lated to the application of computer science and
21 mathematics to develop a level of understanding of
22 the interaction of the parts of a system and of a sys-
23 tem as a whole.

24 “(b) ESTABLISHMENT OF TASKFORCE.—

1 “(1) IN GENERAL.—Subject to the availability
2 of appropriations, the Secretary shall establish a
3 taskforce within the Department of Education to
4 study modeling and simulation and to support the
5 development of the modeling and simulation field.
6 The activities of such taskforce shall include—

7 “(A) helping to define the study of mod-
8 eling and simulation (including the content of
9 modeling and simulation classes and programs);

10 “(B) identifying best practices for such
11 study;

12 “(C) identifying core knowledge and skills
13 that individuals who participate in modeling
14 and simulation programs should acquire; and

15 “(D) providing recommendations to the
16 Secretary with respect to—

17 “(i) the information described in sub-
18 paragraphs (A) through (C); and

19 “(ii) a system by which grants under
20 this section will be distributed.

21 “(2) TASKFORCE MEMBERSHIP.—The member-
22 ship of the taskforce under this subsection shall be
23 composed of representatives from—

1 “(A) institutions of higher education with
2 established modeling and simulation degree pro-
3 grams;

4 “(B) the National Science Foundation;

5 “(C) Federal Government agencies that
6 use modeling and simulation extensively, includ-
7 ing the Department of Defense, the National
8 Institute of Health, the Department of Home-
9 land Security, the Department of Health and
10 Human Services, the Department of Energy,
11 and the Department of Transportation;

12 “(D) private industries with a primary
13 focus on modeling and simulation; and

14 “(E) national modeling and simulation or-
15 ganizations.

16 “(c) ENHANCING MODELING AND SIMULATION AT
17 INSTITUTIONS OF HIGHER EDUCATION.—

18 “(1) ENHANCEMENT GRANTS AUTHORIZED.—

19 “(A) IN GENERAL.—The Secretary is au-
20 thorized to award grants, on a competitive
21 basis, to eligible institutions to enhance mod-
22 eling and simulation degree programs at such
23 eligible institutions.

24 “(B) DURATION OF GRANT.—A grant
25 awarded under this subsection shall be awarded

1 for a 3-year period, and such grant period may
2 be extended for not more than 2 years if the
3 Secretary determines that an eligible institution
4 has demonstrated success in enhancing the
5 modeling and simulation degree program at
6 such eligible institution.

7 “(C) MINIMUM GRANT AMOUNT.—Subject
8 to the availability of appropriations, a grant
9 awarded to an eligible institution under this
10 subsection shall not be for an amount less than
11 \$750,000.

12 “(D) NON-FEDERAL SHARE.—Each eligible
13 institution receiving a grant under this sub-
14 section shall provide, from non-Federal sources,
15 in cash or in kind, an amount equal to 25 per-
16 cent of the amount of the grant to carry out the
17 activities supported by the grant. The Secretary
18 may waive the non-Federal share requirement
19 under this subparagraph for an eligible institu-
20 tion if the Secretary determines a waiver to be
21 appropriate based on the financial ability of the
22 institution.

23 “(2) ELIGIBLE INSTITUTIONS.—For the pur-
24 poses of this subsection, an eligible institution is an
25 institution of higher education that—

1 “(A) has an established modeling and sim-
2 ulation degree program, including a major,
3 minor, or career-track program; or

4 “(B) has an established modeling and sim-
5 ulation certificate or concentration program.

6 “(3) APPLICATION.—To be considered for a
7 grant under this subsection, an eligible institution
8 shall submit to the Secretary an application at such
9 time, in such manner, and containing such informa-
10 tion as the Secretary may require. Such application
11 shall include—

12 “(A) a letter from the President or provost
13 of the eligible institution that demonstrates the
14 institution’s commitment to the enhancement of
15 the modeling and simulation program at the in-
16 stitution of higher education;

17 “(B) identification of designated faculty
18 responsible for the enhancement of the institu-
19 tion’s modeling and simulation program; and

20 “(C) a detailed plan for how the grant
21 funds will be used to enhance the modeling and
22 simulation program of the institution.

23 “(4) USES OF FUNDS.—A grant awarded under
24 this subsection shall be used by an eligible institu-
25 tion to carry out the plan developed in accordance

1 with paragraph (3)(C) to enhance modeling and sim-
2 ulation programs at the institution, which may in-
3 clude—

4 “(A) in the case of an institution that is el-
5 ible under paragraph (2)(B), activities to as-
6 sist in the establishment of a major, minor, or
7 career-track modeling and simulation program
8 at the eligible institution;

9 “(B) expanding the multi-disciplinary na-
10 ture of the institution’s modeling and simula-
11 tion programs;

12 “(C) recruiting students into the field of
13 modeling and simulation through the provision
14 of fellowships or assistantships;

15 “(D) creating new courses to compliment
16 existing courses and reflect emerging develop-
17 ments in the modeling and simulation field;

18 “(E) conducting research to support new
19 methodologies and techniques in modeling and
20 simulation; and

21 “(F) purchasing equipment necessary for
22 modeling and simulation programs.

23 “(d) ESTABLISHING MODELING AND SIMULATION
24 PROGRAMS.—

25 “(1) ESTABLISHMENT GRANTS AUTHORIZED.—

1 “(A) IN GENERAL.—The Secretary is au-
2 thorized to award grants to institutions of high-
3 er education to establish a modeling and sim-
4 ulation program, including a major, minor, ca-
5 reer-track, certificate, or concentration pro-
6 gram.

7 “(B) DURATION OF GRANT.—A grant
8 awarded under this subsection shall be awarded
9 for a 3-year period, and such grant period may
10 be extended for not more than 2 years if the
11 Secretary determines that an eligible institution
12 has demonstrated success in establishing a
13 modeling and simulation degree program at
14 such eligible institution.

15 “(C) MINIMUM GRANT AMOUNT.—Subject
16 to the availability of appropriations, a grant
17 awarded to an eligible institution under this
18 subsection shall not be for an amount less than
19 \$750,000.

20 “(D) NON-FEDERAL SHARE.—Each eligible
21 institution receiving a grant under this sub-
22 section shall provide, from non-Federal sources,
23 in cash or in kind, an amount equal to 25 per-
24 cent of the amount of the grant to carry out the
25 activities supported by the grant. The Secretary

1 may waive the non-Federal share requirement
2 under this subparagraph for an eligible institu-
3 tion if the Secretary determines a waiver to be
4 appropriate based on the financial ability of the
5 institution.

6 “(2) APPLICATION.—To apply for a grant
7 under this subsection, an eligible institution shall
8 submit to the Secretary an application at such time,
9 in such manner, and containing such information as
10 the Secretary may require. Such application shall in-
11 clude—

12 “(A) a letter from the President or provost
13 of the eligible institution that demonstrates the
14 institution’s commitment to the establishment
15 of a modeling and simulation program at the
16 institution of higher education;

17 “(B) a detailed plan for how the grant
18 funds will be used to establish a modeling and
19 simulation program at the institution; and

20 “(C) a description of how the modeling
21 and simulation program established under this
22 subsection will complement existing programs
23 and fit into the institution’s current program
24 and course offerings.

1 “(3) USES OF FUNDS.—A grant awarded under
2 this subsection may be used by an eligible institution
3 to—

4 “(A) establish, or work toward the estab-
5 lishment of, a modeling and simulation pro-
6 gram, including a major, minor, career-track,
7 certificate, or concentration program at the eli-
8 gible institution;

9 “(B) provide adequate staffing to ensure
10 the successful establishment of the modeling
11 and simulation program, which may include the
12 assignment of full-time dedicated or supportive
13 faculty; and

14 “(C) purchasing equipment necessary for a
15 modeling and simulation program.

16 “(e) AUTHORIZATION OF APPROPRIATIONS.—There
17 is authorized to be appropriated to carry out this section
18 \$40,000,000 for fiscal year 2009 and such sums as may
19 be necessary for each of the 4 succeeding fiscal years. Of
20 the amounts authorized to be appropriated for each fiscal
21 year—

22 “(1) \$1,000,000 is authorized to carry out the
23 activities of the task force established pursuant to
24 subsection (b); and

1 “(2) of the amount remaining after the alloca-
2 tion for paragraph (1)—

3 “(A) 50 percent is authorized to carry out
4 the grant program under subsection (c); and

5 “(B) 50 percent is authorized to carry out
6 the grant program under subsection (d).”.

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