
A BILL FOR AN ACT

RELATED TO THE ECONOMY.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

PART I

1
2 SECTION 1. The legislature finds that economic growth to
3 benefit all Hawaii residents will require enhancing the State's
4 human resources; and with respect to job creation in high-paying
5 industry sectors, it means that Hawaii must closely track key
6 growth areas within the State's economy and align its residents'
7 skill sets with the needs of businesses in these emerging
8 industries.

9 For example, the department of business, economic
10 development, and tourism's "2010 Update Report on Hawaii's
11 Targeted & Emerging Industries" identified the following areas
12 as "high-performing" in comparison with national and local
13 growth trends: scientific research and development (averaging
14 5.2 per cent job growth between 2002-2010, or nearly 3.3 per
15 cent higher than growth of the same industry group nationally),
16 medical testing, aquaculture, performing and creative arts,
17 specialty health care, business consulting, design services,
18 technology manufacturing, and computer services. These



1 high-performing jobs in emerging sectors accounted for roughly
2 69,600 jobs (nine per cent of all civilian jobs in 2010), but
3 the sectors generated twenty per cent of the total gain in jobs
4 for Hawaii's civilian economy, or about 15,000 new jobs between
5 2002-2010. For about half of the high-performing sectors, the
6 average annual earnings exceeded \$50,000 in 2010. While other
7 emerging industry sectors may not have demonstrated the same
8 degree of high-performance growth as the above areas, most of
9 the emerging industries target clusters are growing at rates
10 that are higher than other industry sectors within the State.

11 Since 2007, the legislature, department of business,
12 economic development, and tourism, University of Hawaii, and
13 various educational stakeholders have undertaken a pilot
14 demonstration project to evaluate the impact of experiential
15 learning initiatives in science, technology, engineering, and
16 math (STEM) fields and creative media, pursuant to
17 appropriations in Acts 111 and 271, Session Laws of Hawaii 2007,
18 and federal American Recovery and Reinvestment Act of 2009
19 funding during 2009-2010. In 2010, House Concurrent Resolution
20 No. 297, S.D. 1, C.D. 1, further requested a report on the
21 economic value of expanded workforce development capacity and



1 STEM initiatives prior to the start of the 2011 legislative
2 session.

3 Hence, the purpose of this part is to:

- 4 (1) Provide a permanent funding source for STEM
5 experiential learning initiatives that have yielded
6 strong student performance outcomes and expanded the
7 reach of the program through teacher-driven efforts;
- 8 (2) Provide recommendations to maximize the benefits of
9 STEM and creative media experiential learning
10 initiatives (e.g., expanded participation throughout
11 Hawaii's public and private schools, opportunities to
12 leverage public-private resources in broadening the
13 reach of innovative experiential learning programs
14 throughout the State);
- 15 (3) Improve the quality of teaching in STEM fields at
16 Hawaii's public schools by providing professional
17 development opportunities for practicing teachers, as
18 well as attracting highly qualified individuals who
19 hold degrees in these subject areas to the teaching
20 profession; and
- 21 (4) Better align the State's workforce needs for economic
22 growth in new industry clusters through annual



1 reporting requirements for the State's emerging
2 industries in conjunction with the allocation of
3 necessary resources into experiential learning
4 initiatives within the University of Hawaii,
5 department of education, and other business
6 development and education partners.

7 SECTION 2. There is appropriated out of the general
8 revenues of the State of Hawaii the sum of \$ or so
9 much thereof as may be necessary for fiscal year 2011-2012 and
10 the same sum or so much thereof as may be necessary for fiscal
11 year 2012-2013 to:

- 12 (1) The University of Hawaii to implement the requirements
13 of sections 304A-1861, 304A-1862, and 304A-1863,
14 Hawaii Revised Statutes; and
- 15 (2) Require the University of Hawaii, department of
16 education, Robotics Organizing Committee, and STEM
17 demonstration project stakeholders to provide outcome
18 measures for expansion of the FIRST Pre-Academy
19 approach to all public middle schools, if requested;
20 and to identify where STEM and creative media
21 experiential learning programs can significantly



1 impact student performance outcomes in public high
2 schools.

3 The sums appropriated shall be expended by the University
4 of Hawaii for the purposes of this part.

5 **PART II**

6 SECTION 3. There is appropriated out of the general
7 revenues of the State of Hawaii the sum of \$ or so
8 much thereof as may be necessary for fiscal year 2011-2012 and
9 the same sum or so much thereof as may be necessary for fiscal
10 year 2012-2013 to be deposited into the Hawaii 3Ts school
11 technology laboratories fund established pursuant to section
12 302A-1314, Hawaii Revised Statutes.

13 SECTION 4. There is appropriated out of the Hawaii 3Ts
14 school technology laboratories fund the sum of \$ or so
15 much thereof as may be necessary for fiscal year 2011-2012 and
16 the same sum or so much thereof as may be necessary for fiscal
17 year 2012-2013 for the STEMworks project-based, service learning
18 model that combines project-based, high end software access and
19 creative and digital media, pre-engineering hardware and design
20 components; provided that the University of Hawaii, department
21 of education, and other STEMworks demonstration stakeholders
22 shall provide outcome measures for utilization of the updated



1 STEMworks approach in additional schools throughout the
2 State, and identify where STEMworks project-based learning
3 programs can significantly impact student performance outcomes
4 in public high schools; provided further that no funds shall be
5 expended unless matching funds are provided pursuant to section
6 302A-1314(p), Hawaii Revised Statutes.

7 The sums appropriated shall be expended by the Economic
8 Development Alliance of Hawaii, Inc., in accordance with section
9 302A-1314, Hawaii Revised Statutes, and implemented in
10 partnership with county economic development boards, as
11 appropriate, for the purposes of this part.

12 **PART III**

13 SECTION 5. There is appropriated out of the general
14 revenues of the State of Hawaii the sum of \$ or so
15 much thereof as may be necessary for fiscal year 2011-2012 and
16 the same sum or so much thereof as may be necessary for fiscal
17 year 2012-2013 for projects demonstrating cost-effective
18 outcomes in conjunction with improved student performance in
19 STEM and creative media experiential learning programs.

20 The sums appropriated shall be expended by the department
21 of education for the purposes of this Act.

22 **PART IV**



1 SECTION 6. (a) The University of Hawaii, department of
2 education, and Economic Development Alliance of Hawaii, Inc.,
3 shall report on the number of participating students and
4 outcomes for their respective STEM initiatives.

5 The department of business, economic development, and
6 tourism shall compile and report the projections of workforce
7 needs for emerging industries in defense and dual-use,
8 astronomy, engineering, aquaculture, biotech, digital media, and
9 related industries.

10 (b) The agencies shall issue a joint report to the
11 legislature and the governor no later than twenty days prior to
12 the beginning of each regular session of the legislature.

13 SECTION 7. This Act shall take effect on July 1, 2011.

14



Report Title:

Workforce Development; STEM Initiatives; Appropriations

Description:

Appropriates funds to implement the requirements of sections 304A-1861, 304A-1862, and 304A-1863, Hawaii Revised Statutes; appropriates funds for the STEMworks project-based, service learning model; appropriates funds for projects demonstrating cost-effective outcomes in conjunction with improved student performance in STEM and creative media experiential learning programs; requires annual reports by the University of Hawaii, department of education, Economic Development Alliance of Hawaii, Inc., and department of business, economic development, and tourism. (SD1)

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