

ACT 111

S.B. NO. 885

A Bill for an Act Relating to Education.

Be It Enacted by the Legislature of the State of Hawaii:

PART I

SECTION 1. The legislature finds that economic growth that benefits all Hawaii residents depends on enhancing the State's human resources.

Providing students with the specific skills needed for job entry and broad, transferable skills that help students to obtain employment in other fields is an integral part of developing these human resources.

Career and technical education that includes:

- (1) Pathway programs of study such as graphic design, computer networking, and management information systems;
- (2) Academies for various focuses of study, including the performing arts, travel, and science, technology, engineering, and mathematics; and
- (3) School activities such as project EAST (environmental and spatial technology) and robotics,

are important in assisting Hawaii's students in gaining the necessary skills required to compete in the global economy.

The legislature further finds that with the decline of the sugar and pineapple industries in Hawaii, agricultural lands are evolving into small diversified agricultural farms. Further, with the demand for landscaping by many public and private businesses, the landscaping industry is purportedly as large as the diversified agriculture industry in Hawaii. The legislature further finds that the need for agricultural workers, including landscaping and other agriculture industry-related workers, runs the gamut in terms of skill level. There is a critical need for government support to establish an educational infrastructure that prepares students for work in the agriculture and agriculture-related industries. Appropriate programs would assist in preparing students, who may not pursue higher education, for jobs that are in demand.

To further ensure the success of Hawaii's students in the global economy, they must be provided with innovative educational programs, particularly in the fields of science, technology, engineering, and mathematics.

Hence, the purpose of this Act is to:

- (1) Support and enhance the career and technical education efforts of both the department of education and University of Hawaii system, as well as other public and private business efforts, to prepare Hawaii's students for further education and employment;
- (2) Broaden the agriculture education program of the department of education to offer educational opportunities in the fields of farming, diversified agriculture, landscaping, and related fields such as market development and science and technology, and require its coordination with culinary arts programs;
- (3) Provide contextual learning experiences such as participation in robotics;
- (4) Make an array of experiential learning opportunities available to students to afford them experience in the working world, improve their career choices, and provide opportunities for local employers to network with the future workforce; and
- (5) Improve the quality of teaching in science, technology, engineering, and mathematics at Hawaii's public schools by providing professional development opportunities for practicing teachers, as well as attracting to the teaching profession highly qualified individuals who hold degrees in these subject areas.

PART II

SECTION 2. Chapter 302A, Hawaii Revised Statutes, is amended by adding a new section to be appropriately designated and to read as follows:

“**§302A- Career and technical education program.** The department shall establish and administer a career and technical education program that shall meet the requirements of the federal Perkins Act of 2006. The department's program may include:

- (1) Pathway programs of study, including but not limited to natural resources, graphic design, computer networking, and management information systems;
- (2) Academies for various focuses of study, including the performing arts, travel, and science, technology, engineering, and mathematics;
- (3) An agriculture education program;
- (4) Specialized programs, including project EAST (environmental and spatial technology); and
- (5) Other school activities, including robotics.

The department's program may be offered jointly by or in partnership between the department, the University of Hawaii, including its community colleges, or other public or private entities.”

PART III

SECTION 3. Section 302A-431.7, Hawaii Revised Statutes, is amended to read as follows:

“~~[E]§302A-431.7[]-Vocational agriculture]~~ **Agriculture education program.** (a) The department shall establish and administer a ~~[v]ocational~~ comprehensive agriculture education program~~[.]~~ aligned with the natural resources career pathway. The agriculture education program shall include adequate staffing of individuals trained or experienced in the field of ~~[v]ocational~~ agriculture to coordinate the program and to provide assistance to school ~~[distriets]~~ complexes for

the coordination of the activities of related student [agricultural] organizations and associations.

(b) The [vœational] agriculture education program shall be administered by a director who shall:

- (1) [Assess] Assist in assessing the agricultural needs of the [State] state and devise methods of meeting those needs with the [vœational] agriculture education program;
- (2) Assist school districts in establishing [vœational] agriculture education programs;
- (3) Review school district applications for approval of [vœational] agricul-
ture education programs;
- (4) Evaluate existing programs[;] and design complementary programs;
- (5) Plan research and studies for the improvement of curriculum materials for specialty areas of [vœational] agriculture[;], including aquaculture and incumbent worker training;
- (6) Ensure that the standards and criteria developed under this section satisfy the mandates of federally-assisted [vœational] career and technical education;
- (7) Develop in-service programs for teachers and administrators of [vœational] agriculture[;] education programs;
- (8) Review applications for [vœational] agriculture teacher certification;
- (9) Assist in teacher recruitment and placement in [vœational] agriculture education programs;
- (10) Serve as a liaison with the Future Farmers of America, representatives of business, industry, appropriate public agencies, and institutions of higher education, including the Hawaii Farm Bureau Federation, to facilitate dissemination of information;
- (11) Promote improvement of [vœational] agriculture education programs; and
- (12) Assist in the development of adult [and], continuing education, and college-level education programs in [vœational] agriculture[;]¹
- ~~(13) Establish an advisory task force of agriculturists, who represent the diverse areas of the agricultural industry in the State, that shall make annual recommendations on the development of curriculum, staffing, and strategies to establish a source of trained and qualified individuals in agriculture and strategies for developing the state program in vocational agriculture education, including youth leadership throughout the public schools.~~

(c) The agriculture education program shall coordinate with culinary arts programs to teach students healthy eating habits and encourage culinary arts, farming, diversified agriculture, and related fields such as market development and science and technology, as career options. The department of agriculture shall assist the department with the implementation of this program.

~~(e)~~ (d) The department may adopt rules pursuant to chapter 91 to effectuate this section.

(e) For purposes of this section, “agriculture” or “agricultural” includes the fields of farming, diversified agriculture, landscaping, aquaculture, and related industries such as market development and science and technology.”

SECTION 4. The department of education shall consult with the department of agriculture and the University of Hawaii’s college of tropical agriculture and human resources and college of education in the development and implementation of the agriculture education program established under this Act.

SECTION 5. The department of education shall submit a report to the legislature regarding:

- (1) Its activities toward implementation of the agriculture education program;
- (2) Its coordination between the agriculture education and culinary arts programs; and
- (3) Any requests for funding to further implement the agriculture education program,

no later than twenty days prior to the convening of the regular sessions of 2008 and 2009. The first report shall include a description of department activities between July 1, 2006, and June 30, 2007, toward implementing Act 233, Session Laws of Hawaii 2006, codified as section 302A-431.7, Hawaii Revised Statutes, which established a vocational agriculture education program.

SECTION 6. There is appropriated out of the general revenues of the State of Hawaii the sum of \$350,000 or so much thereof as may be necessary for fiscal year 2007-2008 and the same sum or so much thereof as may be necessary for fiscal year 2008-2009 to support and maintain a comprehensive agriculture education program in the public schools as provided in section 3 of this part.

The sums appropriated shall be expended by the department of education for the purposes of section 3 of this part.

PART IV

SECTION 7. There is established the Hawaii excellence through science and technology academy pilot program to be administered by Kauai community college, in partnership with the department of education, at two public schools. The purpose of the pilot program shall be to establish science, technology, engineering, and mathematics academies, which may include an applied learning focus, at the public schools and to add resources and support to the department of education to increase the readiness and motivation of Hawaii high school graduates to pursue post-secondary training and career options in science, technology, engineering, and mathematics disciplines.

SECTION 8. Kauai community college, in collaboration with the department of education, shall submit reports to the legislature as follows:

- (1) A progress report on its plans for the pilot program, no later than twenty days prior to the convening of the regular session of 2008;
- (2) A progress report on its implementation of the pilot program, no later than twenty days prior to the convening of the regular session of 2009; and
- (3) A final report on the pilot program, including associated costs and any recommendations for the expansion of the academies to other public schools, no later than twenty days prior to the convening of the regular session of 2010.

SECTION 9. There is appropriated out of the general revenues of the State of Hawaii the sum of \$261,020 or so much thereof as may be necessary for fiscal year 2007-2008 and the same sum or so much thereof as may be necessary for fiscal year 2008-2009 to establish the Hawaii excellence through science and technology academy pilot program, including three positions within Kauai community college.

The sums appropriated shall be expended by Kauai community college for the purposes of this part.

SECTION 10. There is appropriated out of the general revenues of the State of Hawaii the sum of \$26,730 or so much thereof as may be necessary for fiscal year 2007-2008 and the same sum or so much thereof as may be necessary for fiscal year 2008-2009 for a position within the department of education to collaborate with Kauai community college to establish the Hawaii excellence through science and technology academy pilot program.

The sums appropriated shall be expended by the department of education for the purposes of this part.

PART V

SECTION 11. Chapter 304A, Hawaii Revised Statutes, is amended by adding three new sections to be appropriately designated and to read as follows:

“§304A-A Fostering inspiration and relevance through science and technology pre-academy program; established. (a) There is established within the University of Hawaii, the fostering inspiration and relevance through science and technology pre-academy program, which shall be administered by the University of Hawaii college of engineering. The mission of the fostering inspiration and relevance through science and technology pre-academy program shall be, with respect to middle schools, to provide additional resources and expertise for the department of education to stimulate the interest and achievement of students in science, technology, engineering, and mathematics skills.

To achieve its mission, the fostering inspiration and relevance through science and technology pre-academy program shall house and provide direction for the robotics and problem-based, applied learning program under section 304A-B and the research experiences for teachers program under section 304A-C.

(b) The goals of the pre-academy program shall be to:

- (1) Serve students between fourth and eighth grades, with problem-based, applied learning experiences in science, technology, engineering, and mathematics-related skills in a manner that complements the academic program at public high schools; and
- (2) Motivate and engage students in science, technology, engineering, and mathematics programs.

(c) The pre-academy program shall encourage partnerships with other relevant programs within the University of Hawaii system, department of education, project EAST (environmental and spatial technology) program, and appropriate public and private agencies, to establish a program of problem-based, applied learning for elementary and middle school students in science, technology, engineering, and mathematics disciplines. School participation in the fostering inspiration and relevance through science and technology pre-academy programs shall be voluntary.

(d) The fostering inspiration and relevance through science and technology pre-academy program shall support development of additional problem-based, applied learning projects and summer science, technology, engineering, and mathematics programs for middle school teachers. For additional problem-based, applied learning projects, priority shall be determined in collaboration with participating teachers. Areas may include global positioning system technology, ocean science, astronomy, earth science and wireless communications technology, conservation biology, and other science, technology, engineering, and mathematics skills-stimulating subjects as appropriate.

(e) The fostering inspiration and relevance through science and technology pre-academy program shall develop program evaluation measures to ensure that all programs conducted under the pre-academy program are contributing to the ad-

vancement of science, technology, engineering, and mathematics academics in the elementary and middle schools through research.

§304A-B Robotics and problem-based, applied learning program; established. (a) There is established within the University of Hawaii the robotics and problem-based, applied learning program, which shall be administered by the University of Hawaii college of engineering. The mission of the robotics and problem-based, applied learning program shall be to develop science, technology, engineering, and mathematics skills among students in the fostering inspiration and relevance through science and technology pre-academy program through robotics- and problem-based, applied learning projects and competitions. The robotics and problem-based, applied learning program shall work with existing programs to expand and strengthen activities, including but not limited to National Aeronautics and Space Administration explorer schools; fostering inspiration and relevance through science and technology robotics, lego league, and vex challenges or competitions; botball educational robotics programs; and underwater robotics challenges.

(b) The robotics and problem-based, applied learning program shall coordinate and cooperate with the fostering inspiration and relevance through science and technology pre-academy program in establishing an integrated system of science, technology, engineering, and math-related, problem-based, applied learning programs under the administration of the pre-academy program. The robotics and problem-based, applied learning program shall enlist, encourage, train, and support volunteer teachers and other mentors to conduct robotics and space-related programs at the school level.

§304A-C Research experiences for teachers program; established. (a) There is established within the University of Hawaii the research experiences for teachers program, which shall be administered by the University of Hawaii college of engineering. The purpose of the research experiences for teachers program shall be to support the development of middle school teacher skills and knowledge, and the development of middle school curriculum materials in science, technology, engineering, and mathematics subject areas, with a focus on wireless communications.

(b) The research experiences for teachers program shall:

- (1) Educate teachers in the advances in technology in wireless communications and engineering;
- (2) Enhance teacher research skills through the use of software and innovative uses of equipment;
- (3) Provide teacher participants with hands-on research experiences;
- (4) Support teachers in developing classroom lessons and program activities that meet their course objectives and student performance standards; and
- (5) Provide opportunities to share and collaborate with other teacher participants to ensure successful implementation of curricula and programs.

(c) Specific activities of the research experiences for teachers program shall include:

- (1) Providing on-site lectures, demonstrations, and laboratory tours at the University of Hawaii and middle schools;
- (2) Reviewing wireless communications concepts, methods, history, and applications;
- (3) Reviewing engineering and relevant science concepts, research methodology, and real-world applications;
- (4) Reviewing key components of inquiry-based teaching materials;
- (5) Providing teachers with technical content support;

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- (6) Assisting teachers in adapting state-of-the-art engineering research into a meaningful classroom experience for students;
- (7) Providing seminars to transfer relevant information and experiences among teacher participants and sponsors;
- (8) Providing summer engineering workshop for teachers; and
- (9) Maintaining a website for content and program dissemination.”

SECTION 12. There is appropriated out of general revenues of the State of Hawaii the sum of \$1,402,230 or so much thereof as may be necessary for fiscal year 2007-2008 and the same sum or so much thereof as may be necessary for fiscal year 2008-2009 to establish the fostering inspiration and relevance through science and technology pre-academy program, including nine full-time equivalent (9.00 FTE) positions in the University of Hawaii college of engineering; provided that the sums appropriated shall be allocated as follows:

- (1) \$314,925 for fiscal year 2007-2008 and the same sum for fiscal year 2008-2009 for the robotics and problem-based, applied learning program; and
- (2) \$734,805 for fiscal year 2007-2008 and the same sum for fiscal year 2008-2009 for the research experiences for teachers program.

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

PART VI

SECTION 13. (a) There is established within the department of business, economic development, and tourism, the business/education internship and mentorship program. The purpose of this program is to establish, with the cooperation of educational institutions, internship, mentorship, and other experiential learning arrangements within the business, nonprofit, and government sectors, for Hawaii high school students and Hawaii high school graduates attending college in Hawaii or elsewhere. The goals of this program shall be to provide Hawaii students with experience in the working world to improve their career choices and to provide opportunities for Hawaii employers to establish relationships with students who represent an essential source of skills for Hawaii's future economic growth and prosperity.

(b) The department of business, economic development, and tourism shall coordinate with the department of education and may contract with appropriate government, nonprofit, or for-profit entities to accomplish the purpose and goals of this program.

(c) The department of business, economic development, and tourism shall submit a report to the legislature, no later than twenty days prior to the convening of the regular session of 2009, on its implementation of the business/education internship and mentorship program.

SECTION 14. There is appropriated out of the general revenues of the State of Hawaii the sum of \$110,000 or so much thereof as may be necessary for fiscal year 2007-2008 and the same sum or so much thereof as may be necessary for fiscal year 2008-2009 for the business/education internship and mentorship program.

The sums appropriated shall be expended by the department of business, economic development, and tourism for the purposes of this part.

PART VII

SECTION 15. (a) There is established within the University of Hawaii a professional development program to provide practicing elementary, middle, and high school science and mathematics teachers with opportunities to increase their

knowledge and understanding of recent developments in science, technology, engineering, and mathematics. The professional development program shall be administered by the University of Hawaii college of education and shall be open to both certificated and non-certificated teachers. Design of the professional development program shall include evaluation of best practices in other school jurisdictions.

(b) Recognizing that the year-round public school calendar has shortened the summer period, that not all schools are on the same academic calendar, and that programs throughout the year, offered in a variety of formats, would facilitate immediate implementation in the classroom, the professional development program shall provide a variety of options designed to meet the specific needs of Hawaii's teachers, which may include summer institutes, a combination of summer, after school, or weekend institutes, distance learning through video conferencing or other mechanisms, neighbor island locations, or other options.

(c) The University of Hawaii college of education shall submit a report to the legislature, no later than twenty days prior to the convening of the regular session of 2009, on its implementation of the professional development program in the science, technology, engineering, and mathematics disciplines for teachers, including the number of teachers who have participated in the program.

SECTION 16. There is appropriated out of the general revenues of the State of Hawaii the sum of \$175,000 or so much thereof as may be necessary for fiscal year 2007-2008 and the same sum or so much thereof as may be necessary for fiscal year 2008-2009 for the development of professional development programs in the science, technology, engineering, and mathematics disciplines for practicing teachers.

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

PART VIII

SECTION 17. The legislature finds that there is a chronic shortage of science and mathematics teachers. The recruitment of potential science, technology, engineering, and mathematics teachers for post baccalaureate certificate programs is difficult, but providing the incentive of stipends for individuals to participate in such programs has proven to be effective.

The federal Transition To Teaching program is a successful recruitment program that provides stipends as incentives for people who hold degrees in science, technology, engineering, and mathematics subjects to obtain their teaching certificates through the University of Hawaii's post baccalaureate certificate in secondary education program. The program has resulted in ninety new qualified mathematics and science teachers since it began four-and-a-half years ago.

The program is currently funded under the United States Department of Education's Transition To Teaching program, but the University of Hawaii's transition to teaching grant will expire in 2008. The purpose of this part is to appropriate funds to allow the program to continue.

SECTION 18. The University of Hawaii shall submit a report to the legislature, no later than twenty days prior to the convening of the regular session of 2009, on the status of the transition to teaching program, including the number of individuals who have participated in and completed the program.

SECTION 19. There is appropriated out of the general revenues of the State of Hawaii the sum of \$175,000 or so much thereof as may be necessary for fiscal year 2007-2008 and the same sum or so much thereof as may be necessary for fiscal year 2008-2009 for the transition to teaching program to provide stipends to attract

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science, technology, engineering, and mathematics graduates to the University of Hawaii post baccalaureate certificate in secondary education program.

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

PART IX

SECTION 20. Statutory material to be repealed is bracketed and stricken. New statutory material is underscored.²

SECTION 21. This Act shall take effect on July 1, 2007.

(Approved May 30, 2007.)

Notes

1. Prior to amendment “and” appeared here.
2. Edited pursuant to HRS §23G-16.5.