

# UNIVERSITY OF HAWAII SYSTEM ANNUAL REPORT



REPORT TO THE 2008 LEGISLATURE

Report on Workforce Preparation  
and Workforce Shortage Areas for 2008

Act 283, SLH 2007

January 2008

# REPORT BY THE UNIVERSITY OF HAWAII IN RESPONSE TO ACT 283, SLH 2007

## **INTRODUCTION**

This report was prepared in response to the request in Act 283, SLH 2007; Section 4 that called upon University of Hawaii shall prepare a report detailing:

- (1) *The current activities on each of its campuses to prepare students with the skills and knowledge needed to successfully enter and progress in the Hawaii workforce;*
- (2) *The University of Hawaii's current plans to increase the percentage of Hawaii high school graduates who continue their education by enrolling at a University of Hawaii campus and to increase the percentage of students who earn degrees or certificates within one hundred fifty per cent of the planned length of the degree, particularly in fields where the State is experiencing shortages of qualified employees; and*
- (3) *Recommendations about additional steps the State needs to consider implementing to increase the number of qualified workers in the State.*

## **BACKGROUND**

As part of an economic analysis prepared by the Hawaii Department of Business, Economic Development, and Tourism in 2005, it was reported that,

The Hawaii region has been fortunate to lead the nation into the current cyclical upturn in the national economy. Increased tourism during 2004 and 2005 has helped to reduce the official unemployment rate to about 2.8 percent for the three quarters of 2005. Likewise the number of jobs has increased about 2.8 percent in 2005 following a 2.6 percent increase in 2004. However, these temporary improvements primarily reflect "catch up" after a long period of underperformance. For instance, while tourist arrivals in 2004 increased, the annual total was still short of the 2000 level. Only in 2005 has the 2000 level been surpassed. Even after the tourism increase for 2005 is tallied, the count of international visitors to the state will still be nearly 27 percent below the peak, 1996 level. Likewise, the recent increase in jobs in 2004 and 2005, follows years of anemic growth. In the 11 years from 1992 to 2003 total wage and salary jobs in Hawaii increased a total of only 4.1 percent.

The quality of jobs generated by tourism is generally low. According to U.S. DOL data, weekly wages in Hawaii averaged more than \$100 below the national average in the first quarter of 2005 (before living cost differences are taken into account). In addition, data for 2002 indicate that 18 percent of the civilian employed were working part time. Thus, despite short term gains, Hawaii's long term economic future based on tourism remains very precarious and inadequate to support significant long-run improvement in the standard of living.

This analysis describes the paradox facing Hawaii today, despite having an economy that is producing more jobs than ever before, and the lowest statewide unemployment rate in the country; weekly wages significantly lag the national average. Over the past several years there has been a growing concern about the state's extremely low unemployment rate, continuously below 3.0% since 2005, the need to create a more

diverse economy, and the desire to increase the percentage of jobs that pay a “living wage.” Our ability to successfully deal with these critical issues is dependent upon our ability to create and sustain a high quality, productive workforce.

## ***WORKFORCE DEMAND***

The number of jobs in state in 2006 was approximately 862,000 and is expected to grow by approximately 9%, to over 940,000 jobs by 2017. In addition to needing to fill nearly 7,100 jobs per year due to growth of the workforce, we need to fill approximately 21,400 jobs per year as replacement for existing workers who are expected to leave their current jobs. According to the U.S. Department of Labor, more than half of those jobs will require education and training beyond high school. The total of 28,500 jobs per year to fill does not reflect the potential for job growth presented by emerging economic development initiatives.

Office and administrative support occupations represent the largest segment of total jobs in the state with 123,000 positions, followed by sales and related jobs at 107,000, and food preparation and service with approximately 78,000 jobs. Not surprisingly, these are also the job sectors with the greatest annual demand for new employees, with the three clusters projected to fill 11,100 jobs (new and replacement) annually.

The profile of the jobs can be found in Appendix A, which is an extract from state employment data published by Economic Modeling Specialists, Inc. (EMSI, June 2007).

## ***WORKFORCE SUPPLY***

The availability of a qualified workforce is dependent upon a number of critical components including:

- Workforce Entrants
  - In-Migrants
  - New Entrants
- State Workforce and Economy
  - Characteristics of the Workforce
  - Economic Conditions
- Workforce Leavers
  - Out-Migrants
  - Retirees

**Workforce Entrants:** The pool of entrants to Hawai'i's workforce is constrained by a number of major factors, including: the high cost of housing relative to the prevailing wage structure; relatively small pool of 18 to 24 year olds, the K-12 education system (public and private) produce approximately 14,000 graduates per year, about 50% of the number of new jobs that need to be filled annually; the number of young people who leave the state, approximately 3,000 eighteen year olds leave the state annually for education, training, and employment opportunities elsewhere in the world ; and the declining level of educational skill attainment of many recent high school graduates, which is becoming more critical for entry into the education and training required for an increasing number of jobs.

**The Economy:** Hawai'i's growing economy has resulted in increased demand for workers in just about every industry. The expected demand for qualified workers in the new knowledge industries takes place within a tight employment market (a 2.7% State unemployment rate), and within a sectors that already have identified shortages such as in nursing and most allied health specialties.

**Workforce Leavers:** Hawai'i's aging population and workforce may result in a significant number of individuals leaving the workforce in the next decade. Many of the potential retirees are in fields that require significant education and training for entry to employment. The capacity for the existing workforce preparation system to meet this potential new training demand will be in competition with the preparation of qualified workers in existing shortage areas.

ACT 283 (1) Current Activities –

**WORKFORCE PREPARATION IN THE UNIVERSITY OF HAWAI'I SYSTEM**

Founded in 1907, the University of Hawai'i system is now composed of three university campuses; seven community college campuses; three University Centers, a number of Education Centers, and other research extension and educational facilities distributed across six islands throughout the state. In addition to the major research campus, the University of Hawai'i at Mānoa, the University system includes the University of Hawai'i at Hilo on the island of Hawai'i, and the smaller University of Hawai'i – West O'ahu on the Leeward side of O'ahu. The University of Hawai'i Community College system has four campuses on O'ahu and one each on Maui, Kauai, and Hawai'i, making liberal arts and career preparation college classes accessible and affordable, and easing the transition from high school to college for many students. The education centers are located in the more remote areas of the state and support the rural communities with programs originating from other campuses.

It is the established mission of the University of Hawai'i to:

- Provide quality education and training
- Create knowledge
- Provide service
- Contribute to the cultural heritage of the community
- Respond to state needs

The University of Hawai'i System, as the sole public postsecondary education and training provider in the state, is the primary resource for preparing new entrants into the workforce and for the reeducation of incumbent workers. This role is codified in the policies of the Board of Regents and in the individual unit missions.

**UH Unit Missions**

**University of Hawai'i at Manoa**, a research university of international standing, offers bachelor's degrees in 87 fields of study, master's degrees in 86 fields of study, doctorates in 53 fields of study, first professional degrees in architecture, law, and medicine, and various certificates. The University of Hawai'i at Mānoa has been widely

recognized for its strengths in tropical agriculture, tropical medicine, oceanography, astronomy, electrical engineering, volcanology, evolutionary biology, comparative philosophy, comparative religion, Hawaiian studies, Pacific Islands studies, Asian studies, and Pacific and Asian regional public health.

**The University of Hawai'i at Hilo** is a comprehensive institution that offers baccalaureate liberal arts and professional and selected graduate degrees, including master's degrees in education, Hawaiian language, tropical conservation biology and environmental science, counseling psychology, and China-U.S. relations. The institution offers baccalaureate degrees in various fields of the humanities, natural sciences, and social sciences, as well as in agriculture, nursing, business, and computer science. Programs emphasize student-faculty collaboration, fieldwork, internships, and hands-on learning, and many are organized around the theme of "the island as a learning laboratory," which draws upon the geological, biological, and cultural diversity of the island of Hawai'i.

**The University of Hawai'i-West O'ahu** is an upper division institution. The University of Hawai'i-West O'ahu offers Bachelor of Arts degrees in business administration, humanities, public administration, and social sciences as well as certificate programs that address pressing social needs such as substance abuse and addiction studies, disaster preparedness and emergency management, and environmental studies. A schedule of day, evening, and weekend courses as well as distributed education options for students on all islands are provided to allow student accessibility.

**The University of Hawai'i community colleges** are open-door, low tuition institutions offering programs in liberal arts and various academic, technical, and occupational subjects:

- **Hawai'i Community College** offers a comprehensive career technical program for business, nursing, trades technology, hospitality, and public service careers.
- **Honolulu Community College** offers 22 technical-occupational programs, including programs that are unique to the campus, such as marine technologies, cosmetology, refrigeration and air conditioning, aeronautic maintenance, commercial aviation pilot training, and occupational and environmental safety management.
- **Kapi'olani Community College** is a statewide leader in health services education with nine programs in allied health professions that are not offered at any other campus. The campus also offers the State's only legal assisting program and an extensive food service and hospitality education program. Degree programs in emerging technology fields, including new media arts and biotechnology, as well as programs for educational paraprofessionals and fitness professionals in exercise and sport science, are also offered.
- **Kaua'i Community College** offers career and technical education programs in response to community workforce needs, which include programs in nursing, culinary arts, visitor industry, and information technology and electronics. The college is a university center and utilizes

distance learning to provide access to baccalaureate and graduate level education for Kaua'i County.

- **Leeward Community College** offers selected career and technical education subjects, and provides courses in 67 disciplines. Programs unique to the college include television production and information and computer sciences. Courses are also taught onsite in Wai'anae, O'ahu.
- **Maui Community College** offers a comprehensive career program that includes business, culinary arts, nursing, trade technology, and public service career fields. The college offers courses over the statewide cable system and interactive television system, providing instruction throughout the state.
- **Windward Community College** offers selected career educational programs such as business education and agriculture. The Employment Training Center at Windward Community College provides job training for "at risk" populations in high demand areas, including food service, auto repair, construction occupations, and office technology.

The University of Hawai'i system offers a wide array of programs leading to degrees and certificates across its ten campuses as displayed in Figure 1:

Figure 1  
**CREDENTIALS OFFERED - 2006**

	Manoa	Hilo	WO	CC <sup>1/</sup>	Total
<b>Cert of Achievement</b>				80	80
<b>Associate</b>				116	116
<b>Bachelor's</b>	87	34	6		127
<b>Master's</b>	85	6			91
<b>Doctorate</b>	51	2			53
<b>1st Professional</b>	4				4
<b>Subtotal Deg</b>	227	42	6	196	471
<b>Other Certificates</b>	58	20	5	76	159
<b>Grand Total</b>	285	62	11	272	630

1/ Sum across CC campuses

Students are enrolled in programs leading to these degrees and certificates if they qualify according to the admission policy of the respective unit and program, and if there is sufficient instructional capacity during the term they seek to enroll. In fall 2007, the UH system enrolled more than 50,000 regular credit students as detailed in Figure 2.

Figure 2  
**OPENING ENROLLMENT - FALL 2007**


<b>Total Credit</b>	<b>50,804</b>
UH Community Colleges	26,219
UH Manoa	20,006
UH Hilo	3,608
UH West O'ahu	971

More detailed enrollment data by campus is contained in Appendix B.

Each year, the UH system awards more than 7,000 degrees and certificates to students who fulfill the requirements established by the faculty at each college, and approved by the University Board of Regents. Figure 3 details the unit degree production for the 2006-07 Fiscal Year. More detailed data by campus is contained in Appendix C.

Figure 3

### DEGREES EARNED, FY 2006-07

Manoa	4,313	
Hilo	592	
West O'ahu	217	
Community Colleges	2,713	
<b>Total</b>	<b>7,835</b>	

*On average, over 7,000 degrees were awarded per year over the past 10 years.*

### SEEKING BETTER OUTCOMES

Over the past several years, there have been a number of groups established to examine the issues related to the state's ability to prepare and sustain a workforce. Each of these groups has developed recommendations that if adopted would likely result in significant improvements in our current situation.

#### ***The Millennium Workforce Development Training Program (2000)***

The expansion and diversification of Hawai'i's economy has emerged as a state priority. Such diversification is necessary for the benefit and welfare of the entire community. It is necessary if:

- The economy is to be buffered from the effects of downturns in defense spending and the vagaries of the tourism industry.
- The young people of the state are to have access to high-paying jobs without having to leave the state to acquire them.
- The array of public services which the citizens of the state enjoy are to be continued.

In recognition of these realities, selected industries were identified for particular attention; industries that have the potential for creating the kinds of jobs deemed most desirable and that protect (and draw upon) the environment and natural beauty that make Hawai'i special. These industries, all technology related, are:

- Information Technology (IT)
- Telecommunications
- Biotechnology

- Environmental Science & Technology
- Healthcare

In furtherance of this agenda, the state legislature took steps in 1999 to help ensure that the skilled workforce needed by these industries could be provided within the state. Act 178, SLH 1999, established a millennium workforce development training program to encourage partnerships between education and the technology industry in Hawai`i, and aimed at creating pre-employment and on-the-job training for employees and prospective employees.

### **Better Preparation for Entry Level Jobs**

A very large part of the need that emerged in discussions with employers in the emerging knowledge industries as part of the Millennium Workforce Development program (2000) revolved around the needs for **more** students who are **better prepared** to become new employees in their organizations. The specific needs fall into three distinct categories:

- **Improve basic skills education - needs and means to get there.** Enhance the ability of schools (K-12) and colleges to provide basic skills education of the kinds and at the levels identified/expected by the employers. These skills are those Foundation Basic Skills identified in the Secretary's Commission on Achieving Necessary Skills (SCANS) published by the U.S. Department of Labor in 1991.
- **Increase the number of graduates in certain programs.** This will require expanding the pipeline in the colleges and universities creating sufficient capacity within existing programs to service existing demand. This requirement extends to engineering, the allied health fields, and other technical fields as well.
- **Build a better system to re-educate and re-train current employees.** Continuing education of individuals already employed to enhance their abilities to assume more responsibility, to function more effectively in their jobs and to move into positions for which they previously have not been trained. This training needs to be responsive to employers identified skill and knowledge requirements, and delivered in a manner (time, place, etc.) under which training would be maximally useful.

### ***The Hawai`i-NGA Workforce Project (2004)***

In fall 2003, Hawai`i was one of eight states selected by the National Governors Association (NGA) Center for Best Practices Policy Academy to participate in a project titled Pathways to Advancement: Expanding Postsecondary Educational Opportunities for Working Adults. A diverse Hawai`i team was assembled and with technical assistance provided by the NGA, the following analysis was prepared:



Hawai'i is facing serious structural changes in both its economy and workforce that threaten the long-term standard of living in the region. Research to date into this problem has identified four major shortcomings that are driving Hawai'i towards a low-wage, low skilled economy. These include 1) A Job Quality Gap, 2) A Worker Supply Gap, 3) A Worker Preparation Gap, and 4) A Poorly Performing Educational Pipeline.

Hawai'i's **job quality gap** is a result of high valued jobs in sugar, pineapple and manufacturing being replaced over the last 35 years by lower paying, tourism related activity. Consequently, Hawai'i's per capita personal income fell from 124 percent of the U.S. in 1970 to 95 percent of the U.S. in 2000. Adjusting for the higher price level in Hawai'i, per-capita income is probably closer to 75 percent of the U.S. Average in terms of purchasing power. This, coupled with the tendency of industries such as retailing and food service to offer mostly part-time, low-wage jobs, is pushing Hawai'i towards a predominantly low-wage, low skilled region. In its 2003 Development Report Card, the Corporation for Enterprise Development (CED) ranked the Hawai'i region: 43<sup>rd</sup> in the nation for growth in average pay; 47<sup>th</sup> in industrial diversification, 49<sup>th</sup> in home ownership, 50<sup>th</sup> in long-term employment growth and 50<sup>th</sup> in involuntary part-time employment. These trends must be reversed by revitalizing the capacity of our corporate and entrepreneurial sectors to generate new, high valued goods and services and high-skilled jobs. Otherwise we will increasingly lose our highly educated youth to other regions and our standard of living will stagnate.

Hawai'i is experiencing the beginning of a long-term **worker supply gap** as the baby boom generation begins to leave the labor market. The Hawai'i Department of Labor and Industrial Relations projects that about 28,000 openings per year will occur in the region through 2012. Most of that demand will be in skilled occupations. By contrast only about 12,000 to 15,000 youth are entering the labor market per year. This gap is expected to widen after 2012 as the baby boom begins to reach full retirement age. The combination of an overall labor shortage and out migration of educated youth could create a crisis in the economy of the Hawai'i region within the next five to ten years.

In addition to the problems in the quality of jobs and emerging shortage of workers, Hawai'i suffers from a **worker preparation gap**. Simply, the region is not preparing its youth sufficiently for the skilled jobs we would like to develop in the region. According to the National Center for Educational Statistics (NCES) Hawai'i's averaged graduation rate for high school freshmen (2002-2003) is about 71 percent compared to a national average of 74 percent. NCES and Census data for 2000 show that only 38 percent of high school freshmen in the region will enroll in post-secondary education within four years compared with 52% among the top states in this category. The first year community college drop out rate is nearly 20 percentage points higher for the Hawai'i region than top states. Only 46 percent of Hawai'i college students will complete a bachelor's degree within 6 years compared with 64 percent in top states. This can be reversed but only by addressing the root causes -- low financial support, lack of employer incentives for incumbent worker education, lack

of affordable child care and inadequate college preparation at the high school level.

The lack of worker preparation and the absence of more high-paying, high skilled jobs in the regional economy are linked to a **poorly performing education to work pipeline** that is not ensuring an adequate supply of educated, trained workers upon which a high skilled economy can be built. At every point in the education to work process, Hawai`i underperforms the national average and substantially underperforms the best performing states. For example, based on 2002 data (National Center for Public Policy and Higher Education), only 12 percent of 9<sup>th</sup> graders will finish high school, and enter and graduate from a post secondary institution within 150% of the expected time. This compares with 18 percent nationally and 29 percent for the best performing states. Outside of school aged youth, the Hawai`i region is not getting a sufficient number of incumbent workers back into post secondary training to build their skills and earning potential. In 2000 only 5.2 percent of adults aged 25 to 44 were enrolled in a post-secondary education program compared with 6.2 percent nationally and between 8 and 9 percent for the top ten performing states. It is essential for the kinds of economic transformations needed in the Hawai`i region that this leaky pipeline be patched. More youth must be kept in school and better prepared, encouraged and assisted to enter and complete post-secondary training. Moreover, the vast pool of working adults needs more entry points into the pipeline and support to complete their training and contribute higher skills to the regional economy.

### ***The WICHE Escalating Engagement Project (2006)***

Based on the issues identified in the Hawai`i-NGA project, the University of Hawai`i was selected to participate in the *Escalating Engagement Project* initiated by the Western Interstate Commission for Higher Education (WICHE) with funding from the Ford Foundation. This project compiled a series of recommendations that, if implemented, could deal with the complex of workforce issues facing the state. These recommendations included:

- Enhance the State's Stock of Human Capital
  - Improved Competencies of High School Graduates
  - Increased Skills of Adults with Less than a High School Education
  - Improve Participation and Graduation Rates of College Students
- Provide Skilled Workers in Critical Need Areas
  - Nursing/Allied Health
  - Teachers
  - Science Technologies
- Help to Expand and Diversify the State's Economy
  - Technology Transfer
  - Rapid Response to Employer's Training Needs

Address These Issues as Appropriate in All Parts of the State

### ***Recommended Key Initiatives***

As a part of the deliberations of the legislatively established workgroup (Act 283, SLH 2007), Mr. Dennis Jones, President of the National Center for Higher Education Management Systems (NCHEMS) made a presentation that drew upon his earlier work with the three previously listed initiatives. His recommended summary key initiatives for the State and University to adopt were:

1. Better Align K-12 Learning Outcomes and Assessment with Higher Education Expectations—Ensure Students Leave High School Prepared for Further Education and for Work
2. Significantly Increase Numbers of Adults Acquiring Workplace Literacy Skills
3. Provide Higher Education Access in Areas of Greatest Need
  - Waianae
  - 'Ewa
4. Improve Retention
5. Expand Degree Production in Key Areas
  - Nursing/Allied Health
  - Teacher Education
  - Computer Science (Oriented to Engineering Applications)
  - Science Technologies
6. Create and Sustain a Rapid Response Capability
7. Enhance Educational Programs and Support Systems for Entrepreneurs
8. Promote Technology Transfer

*Create a Policy Environment that Encourages Pursuit of These Initiatives—Realizing that the Policy Environment You Have Yields the Results You're Getting.*

9. Formally Adopt a Set of Goals that Is Agreed to by Executive and Legislative Branches and UHS—a Compact
10. Develop an Agreed-Upon Set of Accountability Measures by Which Progress Toward Goal Achievement Can Be Monitored
11. Create New Funding Relationship Between the State and UHS
  - Eliminate Line Items
  - Calibrate Funding Against External Benchmarks
  - Align Investment Funds Explicitly with Items Identified in the “Compact”
12. Conduct a More Detailed “Policy Audit” to Identify Policies/Procedures that Create Barriers to Pursuit of the Agreed-Upon Public Agenda

**DEVELOPING A SYSTEMATIC UH RESPONSE**

Our ability to continue to sustain a vibrant economy is highly dependent on the ability of the current education system to prepare a sustainable number of qualified individuals to meet employment demands. This requires a major change in behavior on the part of students, parents, educators, employers, and government.

Systematic sustainable change requires:

- A clear understanding of the issues and need for change;
- Clearly stated measurable goals;
- Comprehensive solutions systematically implemented;
- Internal and external incentives that promote the implementation; and
- Assessment of progress

**The Second Decade Project:** The University system Second Decade Project was initiated to develop a better understanding of the critical postsecondary issues facing the state, including workforce issues. Drawing upon data available from a variety of sources, including several of the previously studies, the Project was designed to undertake a detailed analysis, determine public goals, and set benchmarks. The analysis resulted in determining relative need for postsecondary education throughout the state, as detailed in Figure 4.

Figure 4

**Relative Need for Postsecondary Education/Training by Region**

	East	Cent	'Ewa	Wai	N Sh	Win	E HI	W HI	Mau	Kau
Population Growth (Numbers)	H	M	VH	L	L	L	M	M	H	M
Population Growth (Percent)	L	L	VH	L	L	L	M	M	H	M
Projected HS Graduates (Average %)	M	M	VH	H	L	L	L	H	L	L
Income	L	M	H	VH	VH	M	VH	M	M	H
Workforce Participation (%)	H	H	M	H	VH	H	H	L	L	M
Education Attainment (<HS Diploma)	L	M	M	H	L	L	H	VH	H	H
Education Attainment (HS Diploma)	L	L	M	VH	H	M	M	M	M	M
Education Attainment (Bachelor's)	L	L	M	VH	H	L	M	M	M	M
Going Rates (2-Yr)	H	L	M	H	H	M	H	VH	H	L
Going Rates (4-Yr)	L	M	VH	VH	VH	VH	M	H	VH	VH
Skilled Workforce Needs	VH	VH	VH	VH	VH	VH	VH	VH	VH	VH
RELATIVE NEED	31	31	55	57	47	33	45	49	43	41

VH = Very High    H = High    M = Medium    L = Low

The Second Decade Project also identified the following critical higher education needs:

- Increase the educational capital of the state
- Expand workforce development initiatives

- Assist in diversifying the economy
- Address underserved regions and populations of the state, particularly Native Hawaiians

Details on the Second Decade Project may be found at:  
<http://www.Hawai'i.edu/offices/app/seconddecade>

**The UH Strategic Planning Process:** The UH strategic planning process is established in Board of Regents policy and guided by University Executive Policies. It is designed to set goals and priority directions for each of the units within the UH system. The units, in turn, expect that each college will develop detailed implementation strategies.

In preparation for the development of the next Biennial Budget request, the UH system undertook an examination of the issues and needs identified in the Second Decade Project and has developed a set of Strategic Outcomes. Included in these outcomes is a clear focus on meeting the State's need for developing and sustaining a qualified, productive workforce.

The current draft of the UH system Strategic Outcomes are:

**Strategic Outcome #1:** *To position the University of Hawai'i as one of the world's foremost indigenous-serving universities by supporting the access and success of Native Hawaiians.*

Degree Attainment of Native Hawaiians at UH  
 GOAL: INCREASE 3% PER YEAR

UH Institutional Aid Awarded to Native Hawaiians  
 GOAL: DOUBLE AID BY 2011, THEN INCREASE 3% PER YEAR

**Strategic Outcome #2:** *To increase the educational capital of the state by increasing the participation and completion of students, particularly from underserved regions.*

■ Going Rates of Public and Private High Schools, UH System  
 GOAL: INCREASE 3% PER YEAR

■ UH Degrees & Certificates of Achievement Earned  
 GOAL: INCREASE 3% PER YEAR

**Strategic Outcome #3:** *To contribute to the state's economy and provide a solid return on its investment in higher education through research and training.*

■ UH Extramural Fund Support  
 GOAL: INCREASE 3% PER YEAR

**Strategic Outcome #4:** *Address critical workforce shortages and prepare students (undergraduate, graduate, and professional) to be leaders in a globally competitive economy.*

- UH Degrees in STEM Fields  
GOAL: INCREASE 3% PER YEAR
- Projected Annual Vacancies in Shortage Areas Statewide,  
GOAL: INCREASE 5% PER YEAR

*2006–17 and Total UH Output, 2006–07*

Jobs	Projected Annual Vacancies	Goal (FY2014–15)	UH Output (FY2006–07)
Teachers	975	518	368
Nurses (RN)	487	355	252
Computing/IT (Bachelor's)	297	129	92
Social Workers (MSW)	204	124	88
Hospitality (CC)	335	101	72

**Strategic Outcome #5:** *To acquire, allocate, and manage public and private revenue streams and exercise exemplary stewardship over all of the University's resources, including physical and human resources.*

- Annual Investment Needed for UH System Physical Plant  
GOAL: DECREASE TO \$125 MILLION BY 2015
- UH Funding Sources  
GOAL: INCREASE NON-STATE REVENUE STREAMS BETWEEN 3–17% PER YEAR

### **Progress Toward Meeting Recommended Key Initiatives**

The leadership of the UH system has been directly involved in each of the workforce and education assessments cited earlier in this report (pp 6-11). As the various issues and recommendations were published, appropriate implementation responses were designed and implemented. The following is a summary of the various implementation activities:

1. *Better Align K-12 Learning Outcomes and Assessment with Higher Education Expectations—Ensure Students Leave High School Prepared for Further Education and for Work*
  - Hawai'i P-20 Initiative (<http://www.p20hawaii.org/>)
  - American Diploma Project (<http://achieve.org/>)
  - Construction academies, STEM academies
  - GEAR-UP (<http://gearup.hawaii.edu/>)
  - Middle College pilot
  - Career Pathways (<http://www.hawaii.edu/cte/pathways/index.html>)

2. *Significantly Increase Numbers of Adults Acquiring Workplace Literacy Skills*

- Community College enrollment initiative
- Work with Adult Schools

3. *Provide Higher Education Access in Areas of Greatest Need*

- *Waianae*
- *'Ewa*
- UH-West Oahu facilities
- UH-West Hawai'i facilities
- Distance Education and University Centers
- Native Hawaiian programs
- Financial Aid

4. *Improve Retention*

- Achieve the Dream (<http://www.achievingthedream.org/aboutatd/default.tp>)
- Increased \$ for scholarships
- NASH (National Associate of System Heads) Initiative (<http://www.nashonline.org/content/k-16info.html>)
- UH Career Connections ([http://careeraccess.hawaii.edu/career\\_connections/gallery.php](http://careeraccess.hawaii.edu/career_connections/gallery.php))

5. *Expand Degree Production in Key Areas*

- *Nursing/Allied Health*
- *Teacher Education*
- *Computer Science (Oriented to Engineering Applications)*
- *Science Technologies*
- UH Nursing Consortium (<http://www.nursing.hawaii.edu/news-story-1.html>)
- UH Teacher Education Task Force
- UH Hospitality and Tourism Consortium (<http://www.hawaii.edu/search/?cx=008945998903415758105%3A4nrwh9-26ni&cof=FORID%3A11&q=Hospitality+and+tourism+Consortium+&sa=Search#1078>)
- IT Industry Skills Assessment

6. *Create and Sustain a Rapid Response Capability*

- Rapid Response Training Fund, e.g.
  - First Line Supervisor Training
  - Pearl Harbor Skills Training
  - Process Engineering

7. *Enhance Educational Programs and Support Systems for Entrepreneurs*

- UH Hilo Small Business Development Center
- Shidler College of Business PACE initiative (<http://www.shidler.hawaii.edu/ResearchFaculty/Centers/PacificAsianCenterforEntrepreneurshipEBus/tabid/390/Default.aspx>)
- Pacific Business Center Program (<http://www.hawaii.edu/pbcpl/>)

8. *Promote Technology Transfer*

- Office of Technology Transfer and Economic Development (<http://www.htdc.org/incubation/mic/clients-MIC.asp#28>)

10. *Develop an Agreed-Upon Set of Accountability Measures by Which Progress Toward Goal Achievement Can Be Monitored*

- UH Second Decade Project (<http://www.hawaii.edu/offices/app/seconddecade/>)
- UH System Strategic Plan - Updating Outcomes (<http://www.hawaii.edu/ovppp/uhplan/>)

ACT 283 (3) Additional Steps to Consider –

**ADDITIONAL STEPS THE STATE NEEDS TO CONSIDER**

1. **Issue:** Making the changes necessary to meet Hawai'i's growing need for a qualified workforce requires significant changes in both student and institutional behavior across all levels of the education pipeline. There have been numerous attempts to implement the systemic changes necessary to achieve the results we desire to attain. Most of these attempts have been less than successful because they have rarely dealt with a change fundamental: the incentives for students, parents, and educators to adopt new and more desirable behaviors. Dennis Jones described this dilemma in his presentation to the Committee; in his words, *the policy environment you have yields the results you're getting*. Our current policy environment lacks any incentives for new behavior on the part of students, their parents, or institutions that would lead to the results we are trying to achieve. Unless we try different approaches to policy, one promoting the attainment of specific outcomes, current behavior is likely to persist.

**Recommendations:**

- Develop institutional performance incentives by appropriating a revenue stream that is available to the education institutions only if specific performance goals are attained; and
  - Develop scholarship support for students who meet educational proficiency goals, or who enroll in and graduate in fields of study that are high priority for the state.
2. **Issue:** The development of Hawai'i's economy over the past thirty years has resulted in a major change in the types of jobs currently available in the state. The shift from an economy focused on agriculture to one focusing on services—including professional, technical, scientific, and health services—has brought growth in the number jobs that require education and training beyond high school. In addition, the continued adoption of new technologies in our legacy economy has heightened the level of skill and knowledge expected from incumbent workers.



This change in the type of work being done in the state has significantly increased the development of jobs that pay a living wage. Unfortunately, these jobs lack a qualified workforce. The primary cause of the state's slow development of a qualified workforce is the shortage of young people developing relevant knowledge at an early enough age, particularly in mathematics and science. Early competency in these areas prepares students to enroll in the post high school education and training programs essential for employment in Hawai'i's developing new jobs.

The attitudes and interests of young people, and consequently educational decisions, are shaped by their parents, peers, and significant adult role models; unfortunately, the prevailing current opinion in the community described in the Winter 2006 edition of the People's Pulse, a pole commissioned by the Hawai'i Business Roundtable and Pacific Resource Partnership, is that, "Half of residents (51%) feel that a college education is helpful but not a requirement in today's job market. This contrasts with 41% who view college as essential". While there are many jobs in the state that do not require a baccalaureate degree or higher for entry, most jobs that pay a living wage require either long-term on the job training, or a postsecondary degree, including a community college degree for an individual to be considered for permanent employment. In addition, these employers have expectations that their employees have basic academic skills comparable to college entry. Students, their parents, and others opinion leaders in the community need to become better informed about Hawai'i's changing workplace expectations.

#### **Recommendations:**

- Design and deliver a social marketing campaign that informs members of the community, particularly young people and their parents, about the growing number of living wage jobs and the education and training necessary to be employed in these jobs; and
  - Promote the engagement of our business community toward informing teachers and students about the developing opportunities in their industries and expectations for future employees.
3. **Issue:** Starting with the importation of workers from China in 1852, Hawai'i has been dependent upon an imported workforce to meet its labor needs. Over the past thirty years, the infrastructure needed to sustain that model—cheap housing and free healthcare provided by the employer—has largely disappeared. The growing gap between salaries and the cost of sustaining a middle-class lifestyle has made it increasingly difficult to import and retain workers. Our inability to fill jobs in critical fields such as teachers and nurses is partially a reflection of this new reality and our current level of public investment in programs where there have been persistent worker shortages. We need to prepare more of our young people to be productive participants in areas of critical need.

The aging of the Hawai'i population, coupled with the imminent retirement of the "Baby Boom" generation across the nation, make it increasingly less likely that our inability to recruit and retain a qualified workforce in selected critical areas is

a transient phenomenon. Unless we make strategic investments to build capacity in selected key fields, we can expect continued worker shortages.

**Recommendation:**

- Increase state investment in selected programs where lack of student enrollment capacity has resulted in persistent worker shortages.

# **APPENDIX A**

## **HAWAII JOBS 2006 – 2017**

By U.S. Department of Labor  
Standard Occupational Code (SOC) Clusters  
By Annual Jobs to Fill

SOC Code	Description	2006 Jobs	2017 Jobs	New Jobs	Replacement Jobs	Annual Jobs
41-0000	Sales and related occupations	101,513	114,707	13,194	34,199	4,308
35-0000	Food preparation and serving related occupations	77,676	82,383	4,707	34,985	3,608
43-0000	Office and administrative support occupations	123,442	124,555	1,113	34,374	3,226
37-0000	Building and grounds cleaning and maintenance occupations	48,419	58,127	9,708	10,804	1,865
11-0000	Management occupations	51,566	58,721	7,155	10,640	1,618
39-0000	Personal care and service occupations	32,923	41,785	8,862	8,351	1,565
25-0000	Education, training, and library occupations	43,909	50,073	6,164	10,156	1,484
53-0000	Transportation and material moving occupations	48,489	51,438	2,949	12,560	1,410
51-0000	Production occupations	32,898	35,993	3,095	10,477	1,234
29-0000	Healthcare practitioners and technical occupations	31,251	35,774	4,523	6,406	994
13-0000	Business and financial operations occupations	33,709	37,586	3,877	6,679	960
49-0000	Installation, maintenance, and repair occupations	30,049	33,041	2,992	7,562	959
47-0000	Construction and extraction occupations	39,143	40,105	962	8,394	851
55-0000	Military Occupations	53,839	48,405	(5,434)	14,541	828
33-0000	Protective service occupations	22,092	23,505	1,413	7,539	814
27-0000	Arts, design, entertainment, sports, and media occupations	20,255	23,558	3,303	4,221	684
31-0000	Healthcare support occupations	16,509	20,190	3,681	2,962	604
21-0000	Community and social services occupations	12,955	15,894	2,939	2,715	514
15-0000	Computer and mathematical science occupations	11,992	14,383	2,391	1,799	381
19-0000	Life, physical, and social science occupations	8,127	9,104	977	2,137	283
17-0000	Architecture and engineering occupations	11,781	12,143	362	2,732	281
45-0000	Farming, fishing, and forestry occupations	2,783	2,757	(26)	884	78
23-0000	Legal occupations	6,346	6,298	(48)	793	68
		<b>861,667</b>	<b>940,526</b>	<b>78,859</b>	<b>235,907</b>	<b>28,615</b>

Source: Economic Modeling Specialists, Inc. • 4/07

Annual Jobs to Fill 7,169 21,446 28,615

## **APPENDIX B**

### **ENROLLMENT BY CAMPUS AND PROGRAM**

**Table 1 – UH Community Colleges**

**Table 2 – UH Manoa**

**Table 3 – UH Hilo**

**Table 4 – UH West Oahu**

**TABLE 1  
HEADCOUNT ENROLLMENT, BY PROGRAM  
UNIVERSITY OF HAWAI'I COMMUNITY COLLEGES  
FALL 2002 - 2006**

	2002 No.	V%	2003 No.	V%	2004 No.	V%	2005 No.	V%	2006 No.	V%
TOTAL	25,593	100.0	26,344	100.0	25,898	100.0	25,233	100.0	25,260	100.0
GEN & PRE-PROF ED .	14,446	56.4	13,705	52.0	12,603	48.7	12,116	48.0	11,813	46.8
Liberal Arts (AA)	14,446		13,705		12,603		12,114		11,791	
CAREER & TECHNICAL ED	8,167	31.9	7,557	28.7	7,532	29.1	7,268	28.8	7,267	28.8
Business Education	2,346	9.2	1,992	7.6	1,878	7.3	1,719	6.8	1,697	6.7
Accounting	617		565		490		447		453	
Applied Bus & Inform Tech (BAS)							26		32	
Commercial Music (CC)	2		2		1		2		2	
Culinary Arts									45	
E-Business (AS)					18		19		34	
Entrepreneurship (CC)	11		15		16		16		10	
Information Technology Programs	681		477		384		320		264	
Sales & Marketing	111		112		104		93		106	
Business Careers	81		68		83		98		99	
Travel & Tourism	421		378		394		351		304	
Management	75		68		52		51		44	
Business Technology Programs	347		307		336		296		304	
Food Services	739	2.7	679	2.6	647	2.5	633	2.5	657	2.6
Health Services	895	3.5	948	3.6	1,021	3.9	990	3.9	968	3.8
Adult Care Home Oper	21		24		26		28		25	
Assoc Degree Nursing (AS)	494		518		504		483		437	
Biotechnician (CA)							1		2	
Clinical Medical Assisting (CC)	4						1			
Dental Assisting (CC)	16		37		54		43		26	
Emergency Medical Tech (CC)	19		18		19		18		22	
Exercise & Sports Science	3		10		26		41		61	
Medical Assisting	57		47		54		44		47	

Medical Lab Technician (AS)	12		12		15		15		14	
Mobile Intensive Care Tech (AS)	13		10		16		21		20	
Nurses Aide Training	4		1				8			
Occup Therapy Asst (AS)	12		10		18		16		34	
Opticianry (AAS)					2		4		5	
Physical Therapy Asst (AS)	12		17		15		15		16	
Practical Nursing (CA)	153		150		179		167		174	
Radiologic Technology (AS)	50		64		64		55		52	
Respiratory Care Therapist (AS)	25		30		29		30		33	
<b>Public Services</b>	<b>1,452</b>	<b>5.6</b>	<b>1,373</b>	<b>5.2</b>	<b>1,272</b>	<b>4.9</b>	<b>1,228</b>	<b>4.9</b>	<b>1,224</b>	<b>4.8</b>
Admin of Justice	309		258		223		187		204	
Early Childhood	164		150		145		132		116	
Education Paraprofessional (AS)					3		14		16	
Fire / Env Emerg Resp	183		182		153		190		205	
Human Services	527		538		524		495		428	
Industrial Education	3		1		1				6	
Interpreting (AS)							2		15	
Legal Ed - Legal Sec (CC)	2		3		2				2	
Occup Env Safety Mgt	54		50		44		47		62	
Paralegal (AS)	171		157		137		126		119	
Substance Abuse Counsel (CC)	39		34		40		35		51	
<b>Technology</b>	<b>2,712</b>	<b>10.4</b>	<b>2,516</b>	<b>9.6</b>	<b>2,703</b>	<b>10.4</b>	<b>2,694</b>	<b>10.7</b>	<b>2,718</b>	<b>10.8</b>
Aeronautics Main Tech	85		54		53		36		33	
Agriculture	65		66		46		61		51	
Applied Trades	298		225		244		272		287	
Auto Body Rep & Paint	116		135		123		126		127	
Auto Mechanics Tech	465		444		488		455		406	
Building Maintenance Tech (CA)	15		10		9		14		16	
Carpentry	69		85		100		104		110	
Commercial Aviation (AS)	102		62		71		71		65	
Communication Arts	117		100		110		98		102	
Comp, Elec & Network	423		307		246		203		201	
Cosmetology	128		134		148		139		139	
Diesel Mechanics Tech	58		58		38		42		38	
Digital Media Arts (CC)							3		12	
Digital Media Production	26		48		73		82		116	
Drafting Programs	117		121		148		145		152	
Elec & Comp Eng Tech	57		45		51		58		59	
Elec Inst & Maint Tech	129		127		165		201		238	
Electronics Technology	39		52		62		59		48	
Facilities Engineering Tech (CC)	15		15		16		10		6	

Fashion Technology	80		100		92		106		111	
Hawaiian Life Styles	18		36		41		48		40	
Machine Weld & Ind Mech Tech	36		21		25		21		24	
New Media Arts (AS)			16		61		56		59	
Plant Landscaping (CC)	2		5		3		2		2	
Refrig & Air Cond Tech	65		69		68		69		73	
Sheet Metal & Plastics	25		26		22		24		24	
Small Vessel Fab and Repair	14		14		27		22		28	
Sustainable Technology .					4		10		7	
Television Production	77		67		68		54		41	
Trop Forest Ecosys Mgt	16		24		35		32		34	
Welding Technology	55		50		66		71		69	
Career & Tech Ed, Other (ATS) .	23		49	0.2	11	<0.1	4	<0.1	3	<0.1
UNCLASSIFIED	2,715	10.6	2,099	8.0	2,334	9.0	2,421	9.6	2,667	10.6
NO DATA	265	2.2	142	0.5	103	0.4	34	0.1		



**TABLE 2**  
**DISTRIBUTION OF MAJORS BY EDUCATIONAL LEVEL**  
**UNIVERSITY OF HAWAI'I AT MĀNOA**  
**FALL 2006**

	TOTAL		UGRAD	GRAD
	No.	V%	Subtotal	Subtotal
GRAND TOTAL	20,357	100.00	13,977	6,320
ARTS AND SCIENCES	11,484	56.41	9,428	2,056
ARTS & HUMANITIES	1,464	7.19	1,091	373
AMER STUDIES (BA,MA,PHD,GCERT)	103	0.51	38	65
ART (BA,BFA,MFA)	520	2.55	490	30
ART HISTORY (MA)	5	0.02		5
DANCE (BA,MA,MFA).	40	0.20	25	15
DANCE THEATER (BFA)	6	0.03	6	
THEATER (BA,MA,MFA,PHD)	102	0.50	57	45
HISTORY (BA,MA,PHD)	283	1.39	210	73
MUSIC (BA,BMUS,MA,MMUS,PHD)	163	0.80	101	62
PHILOSOPHY (BA,MA,PHD)	100	0.49	51	49
RELIGION (BA,MA,GCERT)	49	0.24	35	14
SPEECH (BA,MA)	93	0.46	78	15
LANG, LING & LIT	1,090	5.35	658	432
EA LANG, EA LIT	295	1.45	215	80
CHINESE (BA,MA,PHD)	42	0.21	26	16
JAPANESE (BA,MA,PHD)	220	1.08	176	44
KOREAN (BA,MA,PHD)	33	0.16	13	20
ENGLISH (BA,MA,PHD)	421	2.07	311	110
HAWN & INDO-PAC LANG & LIT	60	0.29	50	10
HAWAI'IAN (BA,MA)	52	0.26	42	10
PHILIPPINE LANG & LIT (BA)	8	0.04	8	
LANG & LIT OF EUROPE & AMERICAS	115	0.56	82	33
CLASSICS (BA,MA)	6	0.03	6	
FRENCH (BA,MA)	35	0.17	18	17
GERMAN (BA,MA)	11	0.05	9	2

RUSSIAN (BA,MA).	4	0.02	4	
SPANISH (BA,MA)	59	0.29	45	14
LINGUISTICS (MA, PHD)	73	0.36		73
SEC LANG ACQ (PHD)	25	0.12		25
SEC LANG STUDIES	101	0.50		101
SEC LANG STUDIES (MA,GCERT)	101	0.50		101
NATURAL SCIENCES	2,093	10.28	1,574	519
BIOLOGY PROGRAM (BA,BS)	563	2.77	563	
BOTANY (BA,BS,MS,PHD)	97	0.48	32	65
CHEMISTRY (BA,BS,MS,PHD)	134	0.66	94	40
ETHNOBOTANY (BS)	5	0.02	5	
INF & COMP SCI	554	2.72	370	184
COMPUTER SCI (BS,MS,PHD)	365	1.79	313	52
INF & COMP (BA)	57	0.28	57	
LIBRARY (MLISC,GCERT)	132	0.65		132
MARINE BIOLOGY (BS)	236	1.16	236	
MATHEMATICS (BA,BS,MA,PHD)	92	0.45	70	22
MICROBIOLOGY (BA,BS,MS,PHD)	102	0.50	64	38
PHYS & ASTRONOMY	112	0.55	40	72
ASTRONOMY (MS,PHD)	35	0.17		35
PHYSICS (BS,BS,MS,PHD)	77	0.38	40	37
ZOOLOGY (BA,BS,MS,PHD)	198	0.97	100	98
SOCIAL SCIENCES	2,382	11.70	1,697	685
ANTHROPOLOGY (BA,MA,PHD) .	190	0.93	117	73
SCHOOL OF COMMUNICATIONS	271	1.33	234	37
COMMUNICATIONS (BA,MA,GCERT)	213	1.05	178	35
JOURNALISM (BA)	56	0.28	56	
TELECOM & INFO RESOURCE MGT (GCERT)	2	0.01		2
CONFLICT RESOLUTION (GCERT)	6	0.03		6
ECONOMICS (BA,MA,PHD)	223	1.10	164	59
ETHNIC STUDIES (BA)	14	0.07	14	
GEOGRAPHY (BA,MA,PHD)	100	0.49	34	66
INTERNATIONAL CULTURE (GCERT)	2	0.01		2
POLITICAL SCIENCE (BA,MA,PHD)	392	1.93	261	131
PSYCHOLOGY (BA,MA,PHD,GCERT)	742	3.64	642	100
PUBLIC ADMIN (MPA,GCERT)	56	0.28		56
SOCIOLOGY (BA,MA,PHD)	306	1.50	231	75
URBAN / REG PLAN (MURP,PHD,GCERT)	80	0.39		80

OTHER ARTS & SCIENCES	201	0.99	154	47
COMMUN / INFO SCI (PHD)	47	0.23		47
INTERDISCIPLINARY STUDIES (BA)	154	0.76	154	
GENERAL ARTS & SCIENCES (BA)	4,254	20.90	4,254	
GENERAL	2,027	9.96	2,027	
PRE-PROFESSIONAL	2,227	10.94	2,227	
PRE-BUSINESS ADMIN	1,007	4.95	1,007	
PRE-DENTAL	30	0.15	30	
PRE-EDUCATION	355	1.74	355	
PRE-KINESIOLOGY & LEISURE	158	0.78	158	
PRE-LAW	47	0.23	47	
PRE-MEDICAL	212	1.04	212	
PRE-MED TECH	34	0.17	34	
PRE-NURSING	217	1.07	217	
PRE-PHARMACY	95	0.47	95	
PRE-SOCIAL WORK	41	0.20	41	
PRE-SPEECH PATH, AUDIOLOGY	17	0.08	17	
PRE-TRAVEL IND MGT	14	0.07	14	
HAWN, ASIAN & PACIFIC STUDIES	335	1.65	213	122
ASIAN STUDIES (BA,MA)	171	0.84	107	64
HAWN STUDIES (BA,MA)	133	0.65	106	27
PACIFIC ISLANDS PROG (MA)	31	0.15		31
OCEAN & EARTH SCI & TECH	307	1.51	116	191
GEOLOGY-GEOPHYSICS	89	0.44	36	53
GEOLOGY (BA)	9	0.04	9	
GEOLOGY-GEOPHYS (BS,MS,PHD)	80	0.39	27	53
METEOROLOGY (BS,MS,PHD)	75	0.37	40	35
OCEAN & RESOURCES ENG (MS,PHD)	29	0.14		29
OCEANOGRAPHY	114	0.56	40	74
GLOBAL ENV SCI (BS)	40	0.20	40	
OCEANOGRAPHY (MS,PHD,GCERT)	74	0.36		74
ARCHITECTURE	269	1.32	168	101
ARCH (BARCH,MARCH)	2	0.01	2	
ARCH (ARCHD)	267	1.31	166	101
BUSINESS ADMINISTRATION	1,230	6.04	789	441
SCH OF ACCOUNTANCY (BBA,MACC)	264	1.30	219	45

BUSINESS ADMIN (MBA)	346	1.70		346
FIN ECON & INSTITUTION	89	0.44	89	
FINANCE (BBA)	89	0.44	89	
GEN BUSINESS (BBA)	290	1.42	290	
INTERNATIONAL MGT (PHD)	21	0.10		21
MGT & INDUS RELATIONS	125	0.61	96	29
HUMAN RESOURCE MGT (BBA,MHRM)	65	0.32	36	29
INTERNATIONAL BUS (BBA)	3	0.01	3	
MANAGEMENT (BBA)	57	0.28	57	
MGT INFO SYSTEMS (BBA)	37	0.18	37	
MARKETING (BBA)	58	0.28	58	
TRAVEL IND MGT	441	2.17	422	19
TRAVEL INDUS MGT (BS,MS)	441	2.17	422	19
EDUCATION	1,540	7.56	531	1,009
COUNSEL & GUIDANCE (MED)	53	0.26		53
CURRICULUM STUDIES (MED)	224	1.10		224
DISABILITY AND DIVERSITY (GCERT)	11	0.05		11
EARLY CHILDHOOD EDUCATION (MED)	8	0.04		8
EDUCATION (MEDT,PHD)	233	1.14		233
ED ADMIN (MED)	92	0.45		92
ED FOUNDATION (MED)	65	0.32		65
ED PSYCHOLOGY (MED,PHD)	52	0.26		52
ED TECHNOLOGY (MED)	53	0.26		53
ELEMENTARY EDUCATION	349	1.71	346	3
BED PROGRAM	346	1.70	346	
EARLY CHILDHOOD	36	0.18	36	
ELEMENTARY EDUCATION	249	1.22	249	
SPECIAL ED (EL & SP)	61	0.30	61	
ELEM ED (MED)	3	0.01		3
SECONDARY EDUCATION	190	0.93	94	96
BED PROGRAM	94	0.46	94	
BUSINESS & OFFICE	1	<0.01	1	
ENGLISH	13	0.06	13	
GENERAL SCIENCE	6	0.03	6	
GEOGRAPHY	1	<0.01	1	
HAWAI'IAN STUDIES	1	<0.01	1	
HISTORY	17	0.08	17	
INDUSTRIAL ARTS	2	0.01	2	

JAPANESE	3	0.01	3	
MATHEMATICS	7	0.03	7	
MUSIC	8	0.04	8	
PHYSICAL EDUCATION	21	0.10	21	
SECONDARY	8	0.04	8	
SOCIOLOGY	1	<0.01	1	
TRADES & INDUSTRY	1	<0.01	1	
VOC AGRICULTURE	1	<0.01	1	
VOC HOME ECONOMICS	3	0.01	3	
SECONDARY ED (MED,PB)	96	0.47		96
KLS, REC LEADER	133	0.65	91	42
KLS, HTH / EX SCI & LIFE MGT (BS)	88	0.43	88	
KLS, PHYSICAL ED (BS)	1	<0.01	1	
KLS, REC & LEISURE SCI (BS)	2	0.01	2	
KLS, KINESIOLOGY & LEIS SCI (MS)	42	0.21		42
SPECIAL EDUCATION (MED,PB)	77	0.38		77
ENGINEERING	983	4.83	806	177
CIVIL ENG (BS,MS,PHD)	361	1.77	297	64
ELEC ENG (BS,MS,PHD)	361	1.77	283	78
MECH ENG (BS,MS,PHD)	261	1.28	226	35
TROP AG & HUMAN RESOURCES	820	4.03	600	220
FAMILY AND CONSUMER SCIENCES	285	1.40	285	
APPAREL PROD DESIGN & MER (BS)	159	0.78	159	
FAMILY RESOURCES (BS)	126	0.62	126	
HUMAN NUTR, FOOD & ANIMAL SCIENCES	200	0.98	157	43
ANIMAL SCI (BS,MS)	78	0.38	57	21
FOOD SCI & HUMAN NUTR (BS)	100	0.49	100	
FOOD SCIENCE (MS)	7	0.03		7
NUTRITIONAL SCIENCES (MS)	15	0.07		15
MOLECULAR BIOSCIENCES & BIOENG	121	0.59	50	71
BIOENGINEERING (BS,MS)	58	0.28	50	8
MOL BIOSCI & BIOENG (MS,PHD)	63	0.31		63
NATURAL RESOURCES & ENVIRON MGT	83	0.41	38	45
AG & RES ECON (BS,MS,PHD)	2	0.01		2
NAT RES & ENV MGT (BS,M,S,PHD)	81	0.40	38	43
PLANT & ENV BIOTECH (BS)	26	0.13	26	
PLANT & ENVIRON PROTECT SCIENCES	33	0.16	7	26
ENTOMOLOGY (MS,PHD)	15	0.07		15

PLANT & ENV PROTECT SCI (BS)	7	0.03	7	
TROP PLANT PATHOLOGY (MS,PHD)	11	0.05		11
TROPICAL PLANT & SOIL SCIENCES	72	0.35	37	35
AGRON & SOIL SCI (BS,MS,PHD)	2	0.01		2
HORT, TROP (BS,MS,PHD)	4	0.02		4
TROP PLANT & SOIL SCI (BS,MS,PHD)	66	0.32	37	29
MEDICINE	464	2.28	63	401
ALLIED MEDICAL SCI	87	0.43	63	24
MEDICAL TECH (BS)	16	0.08	16	
SP PATH & AUD (BS,MS)	71	0.35	47	24
BIOCHEM & BIOPHYS	1	<0.01		1
BIOCHEM (MS,PHD)	1	<0.01		1
BIOMED SCI (MS,PHD)	16	0.08		16
CELL & MOLECULAR BIO (MS,PHD)	35	0.17		35
MEDICINE (MD)	249	1.22		249
PHYSIOLOGY (MS,PHD)	19	0.09		19
PUBLIC HEALTH & EPIDEMIOLOGY	40	0.20		40
EPIDEMIOLOGY (PHD)	5	0.02		5
PUBLIC HEALTH (MS,MPH,DRPH)	35	0.17		35
TROP MED (MS,PHD)	17	0.08		17
NURSING & DENTAL HYGIENE	490	2.41	366	124
DENT HYGIENE (BS)	72	0.35	72	
NURSING, UPPER DIV (BS)	13	0.06	13	
PROF NURS (BS,MS,PHD,GCERT)	405	1.99	281	124
SOCIAL WORK (BSW,MSW,PHD)	236	1.16	40	196
LAW	318	1.56		318
LAW (JD)	291	1.43		291
MASTER IN LAW (LLM)	10	0.05		10
LAW NON-DEGREE (UNCLASS)	17	0.08		17
UNCLASSIFIED	1,380	6.78	435	945
NO DATA	17	0.08		

**TABLE 3**  
**DISTRIBUTION OF MAJORS, CREDIT STUDENTS**  
**UNIVERSITY OF HAWAI'I AT HILO**  
**FALL 2002 TO FALL 2006**

MAJOR	2006	
	No.	V%
TOTAL	3,507	100.0
Col of Ag, For & Nat Res Mgt	164	4.7
College of Business & Econ	357	10.2
Business Administration	326	9.3
Economics	31	0.9
College of Arts & Sciences	2,712	77.3
Humanities	426	12.1
Art	77	2.2
China-U.S. Relations	16	0.5
Communication	151	4.3
English	78	2.2
Japanese Studies	42	1.2
Music		
Performing Arts	41	1.2
Philosophy	21	0.6
Natural Sciences	801	22.8
Astronomy	54	1.5
Biology	198	5.6
Chemistry	60	1.7
Computer Science	73	2.1
Geology	25	0.7
Marine Science	218	6.2
Mathematics	36	1.0
Natural Science	27	0.8
Nursing	48	1.4
Physics	18	0.5
Trop Conserv Bio & Env Sci	44	1.3
Social Sciences	845	24.1
Administration of Justice	63	1.8

Anthropology	72	2.1
Counseling Psychology	19	0.5
Education	16	0.5
Education Elementary (Cert)	38	1.1
Education Secondary (Cert)	28	0.8
Environmental Studies	2	0.1
Geography	41	1.2
Health & Physical Ed	75	2.1
History	39	1.1
Political Science	96	2.7
Psychology	284	8.1
Sociology	72	2.1
Interdisciplinary Majors	49	1.4
Liberal Studies	20	0.6
Linguistics	29	0.8
General / Pre-Professional	591	16.9
General	423	12.1
Pre-Education		
Pre-Engineering	22	0.6
Pre-Nursing	146	4.2
Ka Haka 'Ula O Ke'elikolani	89	2.5
Hawai`ian Lang & Lit	8	0.2
Hawai`ian Studies	76	2.2
Hawn & Indig Lang & Cul Revital	5	0.1
Indigenous Teacher Ed		
Unclassified	145	4.1



**TABLE 4  
DISTRIBUTION OF MAJORS  
UNIVERSITY OF HAWAI'I-WEST O'AHU  
FALL 2002 TO FALL 2006**

STUDENT MAJOR	Fall 2006	
	No.	V%
TOTAL	866	100.0
Humanities	73	8.4
Hawai'ian-Pac St. Concentration	16	1.8
Humanities Concentration		
History Concentration.	30	3.5
Literature Concentration.	15	1.7
Philosophy Concentration	12	1.4
Professional Studies	381	44.0
Business Administration	263	30.4
Accounting Concentration	102	11.8
Business Admin Concentration	161	18.6
Public Administration	118	13.6
Cert. in Disaster Preparedness	5	0.6
Justice Administration Concentr	60	6.9
Public Administration Concentr	53	6.1
Social Sciences	341	39.4
Social Science (BASS)	67	7.7
Anthropology Concentration	15	1.7
Early Childhood Educ Concentr	38	4.4
Economics Concentration	13	1.5
Political Science Concentration	10	1.2
Psychology Concentration	144	16.6
Sociology Concentration	45	5.2
Cert. in Appl. Forensic Anthropol	2	0.2
Cert. in Interdiscip. Environ. St.	1	0.1
Cert. in Substance Abuse	6	0.7
Unclassified	40	4.6
No Data		

## **APPENDIX C**

### **DEGREES AND CERTIFICATES EARNED BY CAMPUS AND DEGREE TYPE 2006-07**

**Table 1 – UH Manoa**

**Table 2 – UH Community Colleges**

Table 2A – Hawai'i CC

Table 2B – Honolulu CC

Table 2C – Kapiolani CC

Table 2D – Kauai CC

Table 2E – Leeward CC

Table 2F – Maui CC

Table 2G – Windward CC

**Table 3 – UH Hilo**

**Table 4 – UH West Oahu**

**TABLE 1**  
**DEGREES AND CERTIFICATES EARNED, BY DEGREE TYPE**  
**UNIVERSITY OF HAWAI'I AT MĀNOA**  
**FISCAL YEARS (July 1 to June 30) 2002-2003 TO 2006-07**

DEGREE TYPE	2002-03	2003-04	2004-05	2005-06	2006-07
TOTAL	3,696	3,859	4,175	4,401	4,313
Percent Change	7.0	4.4	8.2	5.4	-2.0
Cert in Dental Hygiene					
Bachelor's Degrees	2,393	2,543	2,647	2,837	2,836
BA (Subtotal)	1,061	1,116	1,258	1,308	1,405
BA (Arts & Sciences)	1,030	1,077	1,217	1,262	1,354
BA (Hawn, Asian, Pac St)	30	39	39	43	48
BA (Ocn, Earth Sci Tech)	1		2	3	3
BArch	22	13	10		1
BBA	490	475	496	566	499
BEEd	195	253	178	244	219
BFA	45	55	42	52	33
BMus	5	3	2	2	5
BS (Subtotal)	562	609	645	662	656
BS (Agriculture)	133	127	143	161	143
BS (Arts & Sciences)	123	115	139	112	108
BS (Education)	20	19	16	21	44
BS (Engineering)	79	106	89	118	101
BS (Medicine)	29	26	19	23	15
BS (Nursing & Dental Hyg)	90	100	105	112	97
BS (Ocean, Earth Sci Tech)	15	26	30	14	23
BS (Travel Industry Mgt)	73	90	104	101	125
BSW	13	19	16	3	18
Post-Baccalaureate in Education	45	96	78	80	63
Professional Diploma					
Professional Diploma in Ed					
Post-Baccalaureate	45	96	78	80	63
Master's Degrees	1,002	965	1,140	1,163	1,094
LLM		4	6	5	11
MA	224	183	217	255	253
MA (Arts & Sciences)	201	159	181	222	227
MA (Hawn, Asian, Pac St)	23	24	36	33	26
MAcc	32	52	51	44	29
MArch	3				
MBA	177	161	149	158	149
MEd	185	147	197	221	178

MEdT	25	16	16	36	29
MFA	14	14	22	15	17
MHRM			27	24	
MLIS / MLISC	38	51	49	49	55
MMus	2	1	1	5	1
MPA	11	27	26	19	29
MPH	12	8	16	16	18
MPS					
MS (Subtotal) .	186	206	240	231	225
MS (Agriculture)	19	19	25	30	50
MS (Arts & Sciences)	28	57	47	57	58
MS (Education)	14	19	22	8	14
MS (Engineering)	26	22	50	36	24
MS (Medicine)	49	44	30	38	25
MS (Nursing & Dental Hyg)	18	15	36	21	22
MS (Ocean, Earth Sci Tech)	22	23	23	26	23
MS (Travel Ind Mgt)	10	7	7	15	9
MSW	82	84	107	73	88
MURP	11	11	16	12	12
Doctor's Degrees	128	109	149	147	144
DrPH	1				
EdD					
PhD	127	109	149	147	144
First Professional Degrees	128	146	161	174	176
ArchD (Architecture)	3	4	7	9	5
JD (Law)	72	76	98	101	111
MD (Medicine)	53	66	56	64	60
No Data					

SOURCES: Computer Reports 1454B and 3013H; Graduate Division data, University of Hawai'i at Manoa. FY 2002-03 data from Student Information Management System (SIMS). FY 2003-04 data from Student Information Management System (SIMS) and Banner Operational Data Store (ODS). Effective FY 2004-05, data are from Banner Operational Data Store (ODS) Iro\_Degree.

**TABLE 2  
DEGREES AND CERTIFICATES EARNED  
UNIVERSITY OF HAWAI'I, COMMUNITY COLLEGES  
FISCAL YEARS (July 1 to June 30) 2002-03 TO 2006-07**

CAMPUS / DEGREE TYPE	2002-03	2003-04	2004-05	2005-06	2006-07
TOTAL	2,711	2,596	2,671	2,637	2,713
Percent Change	6.2	-4.2	2.9	-1.3	2.9
Certificates of Achievement	336	300	324	340	315
Baccalaureate Degree					3
Associate Degrees	2,375	2,296	2,346	2,295	2,393
AA	1,104	1,137	1,155	1,127	1,167
AA (Liberal Arts)	1,104	1,137	1,155	1,127	1,167
AAS, AS, ATS	1,271	1,159	1,191	1,168	1,226
Advanced Professional Certificate			1	2	2
No Data					

Note: Certificates of Completion are not included in the counts for this table.

SOURCE: Registrars, University of Hawai'i, Community Colleges; Computer Report 2527. FY 2001-02 data are from Registrars, University of Hawai'i, Community Colleges, Student Information Management System (SIMS), and SPHF files; FY 2002-03 and FY 2003-04 data are from Student Information Management System (SIMS); Effective FY 2004-05, data are from Banner Operational Data Store (ODS) Iro\_Degree.

**TABLE 2-A  
DEGREES AND CERTIFICATES EARNED, BY DEGREE, GENDER, AND PROGRAM  
HAWAI'I COMMUNITY COLLEGE  
JULY 1, 2006 TO JUNE 30, 2007**

CAMPUS / PROGRAM	TOTAL	CA SUBT	Assoc SUBT
HAWAI'I COMMUNITY COLLEGE 1/	311	65	246
General & Pre-Prof Education (AA)	84		84
Career & Technical Education	227	65	162
Business Education	23	3	20
Accounting (AAS)	1		1
Business Tech (CA,AAS)	9	1	8
Business Tech (CA,AAS)	4	1	3
Office Admin & Tech (CA,AAS)	5		5
Hotel Operations (CA,AAS)	1	1	
Information Technology (CA,AS)	6		6
Marketing (CA, AAS)	6	1	5
Food Services (CA,AAS)	26	13	13
Health Services	33	11	22
Associate Degree Nursing (AS)	22		22
Practical Nursing (CA)	11	11	
Public Services	30		30
Admin of Justice (AS)	15		15
Early Childhood Educ (CA,AS)	15		15
Technology	115	38	77
Agriculture (CA,AAS)	2	2	
Architecture Eng & CAD Tech (AAS)	7		7
Auto Body Rep & Paint (CA,AAS)	9	5	4
Auto Mechanics (CA,AAS)	35	16	19
Carpentry (CA,AAS)	17	8	9
Diesel Mechanics (CA,AAS)	4	1	3
Elec Inst & Maint Tech (CA,AAS)	11	2	9
Electronics Tech (AAS)	7		7
Hawai'ian Life Styles (AAS)	4		4
Mach, Weld & Ind Mech Tech (CA,AAS)	5		5
Mach, Weld & Ind Mech Tech (CA,AAS)	5		5
Trop Forest Ecosys Mgt (CA,AS)	14	4	10

1/ Hawai'i Community College graduates numbered 265; 44 students earned two degrees / certificates and 1 student earned 3 degrees / certificates.

SOURCE: Banner Operational Data Store (ODS) Iro\_Degree.

**TABLE 2-B  
DEGREES AND CERTIFICATES EARNED, BY DEGREE, GENDER, AND PROGRAM  
HONOLULU COMMUNITY COLLEGE  
JULY 1, 2006 TO JUNE 30, 2007**

CAMPUS / PROGRAM	TOTAL	CA SUBT	Assoc SUBT	Other SUBT
HONOLULU COMMUNITY COLLEGE 1/	537	32	503	2
General & Pre-Prof Education (AA)	89		89	
Career & Technical Education	448	32	414	2
Public Services.	88	3	85	
Administration of Justice (AAS)	19		19	
Early Childhood Education (AS)	16		16	
Fire / Env Emg Resp (CA,AAS)	19	1	18	
Human Services (CA,AAS)	25	1	24	
Occ Env Safety Mgt (CA,AS)	9	1	8	
Technology	360	29	329	2
Aeronautics Main Tech (CA,AS)	1	1		
Applied Trades (AAS)	151		151	
Arch Engr & CAD Tech (CA,AS) .	15	3	12	
Auto Body Rep & Paint (CA,AAS)	12		12	
Auto Mechanics Tech (CA,AAS)	19		19	
Carpentry Tech (CA,AAS)	13		13	
Communication Arts (AS)	16		16	
Comp, Elec & Net Tech (AS,APC)	27		25	2
Cosmetology (CA,AAS)	21	9	12	
Diesel Mechanics Tech (CA,AAS)	8		8	
Elec Inst & Maint Tech (CA,AAS)	16		16	
Fashion Technology (CA,AAS)	12		12	
Refrig & Air Cond Tech (CA,AAS)	13	1	12	
Sheet Metal & Plastics Tech (CA,AAS)	8	8		
.....				
Small Vessel Fab & Rep (AAS)	8		8	
Welding Tech (CA,AAS)	20	7	13	

1/ Honolulu Community College graduates numbered 530; 7 students earned two degrees / certificates.

SOURCE: Banner Operational Data Store (ODS) Iro\_Degree.

**TABLE 2-C  
DEGREES AND CERTIFICATES EARNED, BY DEGREE, GENDER, AND PROGRAM  
KAPI'OLANI COMMUNITY COLLEGE  
JULY 1, 2006 TO JUNE 30, 2007**

CAMPUS / PROGRAM	TOTAL	CA SUBT	Assoc SUBT
KAPI'OLANI COMMUNITY COLLEGE 1/	757	49	708
General & Pre-Prof Education (AA)	339		339
Career & Technical Education	418	49	369
Business Education	114	8	106
Accounting (CA,AS)	23	4	19
eBusiness (AS)	11		11
Hotel / Restaurant Operations (AS)	28		28
Information Technology (CA,AS)	18	2	16
Sales & Marketing (CA,AS)	11		11
Travel and Tourism (CA,AS)	23	2	21
Food Services	69	3	66
Food Service (AS)	66		66
Food Serv, Culinary Art (CA)	3	3	
Health Services	171	38	133
Associate Degree Nursing (AS)	64		64
Biotechnician (CA)	1	1	
Exercise and Sports Science (CA,AS)	5		5
Medical Assisting (CA,AS)	23	14	9
Medical Lab Technician (AS)	8		8
Mobile Intensive Care Tech (AS)	6		6
Occup Therapy Assistant (AS)	5		5
Physical Therapy Assistant (AS)	6		6
Practical Nursing (CA)	23	23	
Radiologic Technology (AS)	18		18
Respiratory Care (AS)	12		12
Public Services	49		49
Education Paraprofessional (AS) .	16		16
Interpreting (AS)	6		6
Paralegal (AS)	27		27
Technology	14		14
New Media Arts (AS)	14		14



Voc, Other (ATS) .....	1		1	
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1/ Kapi'olani Community College graduates numbered 701; 38 students earned two degrees / certificates and 9 students earned three degrees / certificates.

SOURCE: Banner Operational Data Store (ODS) Iro\_Degree.

**TABLE 2-D  
DEGREES AND CERTIFICATES EARNED, BY DEGREE, GENDER, AND PROGRAM  
KAUA'I COMMUNITY COLLEGE  
JULY 1, 2006 TO JUNE 30, 2007**

CAMPUS / PROGRAM	TOTAL	CA SUBT	Assoc SUBT
KAUA'I COMMUNITY COLLEGE 1/	135	44	91
General & Pre-Prof Education (AA)	27		27
Career & Technical Education	108	44	64
Business Education	36	6	30
Accounting (CA,AAS)	8	1	7
Business Tech (CA,AAS)	8	2	6
Business Tech (CA,AAS)	2		2
Office Admin & Tech (CA,AAS)	6	2	4
Culinary Arts (CA,AAS)	14	3	11
Hospitality and Tourism	6		6
Hospitality and Tourism (AAS)	1		1
Hotel Operations (CA,AAS)	5		5
Health Services	60	33	27
Associate Degree Nursing (AS)	27		27
Practical Nursing (CA)	33	33	
Public Services	3	1	2
Early Childhood Educ (CA,AS)	3	1	2
Technology	9	4	5
Auto Body Rep & Paint (CA,AAS)	1		1
Auto Mechanics Tech (CA,AAS)	5	4	1
Electronics Tech (CA,AAS)	3		3

1/ Kaua'i Community College graduates numbered 109; 26 students earned two degrees / certificates.

SOURCE: Banner Operational Data Store (ODS) Iro\_Degree.

**TABLE 2-E  
DEGREES AND CERTIFICATES EARNED, BY DEGREE, GENDER, AND PROGRAM  
LEEWARD COMMUNITY COLLEGE  
JULY 1, 2006 TO JUNE 30, 2007**

CAMPUS / PROGRAM	TOTAL	CA SUBT	Assoc SUBT
LEEWARD COMMUNITY COLLEGE 1/	514	21	493
General & Pre-Prof Education (AA)	408		408
Liberal Arts - Transfer (AA)	397		397
Teaching (AA)	11		11
Career & Technical Education	106	21	85
Business Education	51	11	40
Accounting (CA,AS)	14	1	13
Business Technology (CA,AS)	24	10	14
Business Technology (CA,AS)	23	10	13
Office Admin & (CA,AS)	1		1
Info & Computer Science (AS)	11		11
Management (AAS)	2		2
Food Services	15	1	14
Food Service (CA,AAS)	15	1	14
Technology	40	9	31
Automotive Tech (CA,AAS)	21	6	15
Digital Media Production (AS)	13		13
Television Production (CA,AS)	6	3	3

1/ Leeward Community College graduates numbered 496; 18 students earned two degrees / certificates.

SOURCE: Banner Operational Data Store (ODS) Iro\_Degree.

**TABLE 2-F  
DEGREES AND CERTIFICATES EARNED, BY DEGREE, GENDER, AND PROGRAM  
MAUI COMMUNITY COLLEGE  
JULY 1, 2006 TO JUNE 30, 2007**

CAMPUS / PROGRAM	TOTAL	CA SUBT	Assoc SUBT	Other SUBT
MAUI COMMUNITY COLLEGE 1/	336	104	229	3
General & Pre-Prof Education (AA)	97		97	
Career & Technical Education	239	104	132	3
Business Education	65	21	41	3
Accounting (CA,AAS)	19	8	11	
Applied Bus & Info Tech (BAS)	3			3
Business Careers (CA,AAS)	13	2	11	
Business Tech (CA,AAS)	16	5	11	
Business Tech (CA,AAS)	13	4	9	
Office Admin & Tech (CA,AAS)	3	1	2	
Hotel Operations (CA,AAS)	14	6	8	
Food Services (CA,AAS)	44	20	24	
Health Services	81	42	39	
Associate Degree Nursing (AS)	39		39	
Practical Nursing (CA)	42	42		
Public Services	22	9	13	
Admin of Justice (CA,AAS...)	9	4	5	
Human Services (CA,AS)	13	5	8	
Technology	27	12	15	
Agriculture (CA,AAS)	3		3	
Automotive Tech (CA,AAS)	9	4	5	
Elec & Comp Eng Tech (CA,AS)	11	7	4	
Fashion Technology (CA,AAS)	4	1	3	

1/ Maui Community College graduates numbered 248; 72 students earned two degrees / certificates, 4 students earned three degrees / certificates, 1 student earned four degrees / certificates and 1 student earned 6 degrees / certificates.

SOURCE: Banner Operational Data Store (ODS) Iro\_Degree.

**TABLE 2-G  
DEGREES AND CERTIFICATES EARNED, BY DEGREE, GENDER, AND PROGRAM  
WINDWARD COMMUNITY COLLEGE  
JULY 1, 2006 TO JUNE 30, 2007**

CAMPUS / PROGRAM	TOTAL	AA SUBT
WINDWARD COMMUNITY COLLEGE 1/	123	123
General & Pre-Prof Education (AA)	123	123

1/ Windward Community College graduates numbered 122; 1 student earned two degrees / certificates.

SOURCE: Banner Operational Data Store (ODS) Iro\_Degree.

**TABLE 3**  
**DEGREES AND CERTIFICATES EARNED, BY DEGREE TYPE AND COLLEGE**  
**UNIVERSITY OF HAWAI'I AT HILO**  
**FISCAL YEARS (July 1 to June 30) 1996-97 TO 2006-07**

DEGREE TYPE AND COLLEGE	2002-03	2003-04	2004-05	2005-06	2006-07
TOTAL	502	579	497	614	592
Percent Change	10.6	15.3	14.2	23.5	-3.6
BY DEGREE TYPE:					
BACHELOR'S DEGREE	450	518	453	537	530
BA (Arts & Sciences)	317	371	316	375	371
BA (Business & Economics)	8	10	11	9	9
BA (Ka Haka 'Ula Ke'elikolani)	15	13	11	13	11
BBA (Business Administration)	54	49	42	53	60
BS (Agriculture)	18	25	26	25	33
BS (Arts & Sciences)	38	50	47	62	46
CERTIFICATES IN EDUCATION	36	48	41	59	40
Arts & Sciences	36	37	40	46	38
Ka Haka 'Ula O Ke'elikolani		11	1	13	2
MASTER'S DEGREE	16	13	3	18	22
MA	1	2		4	16
MEd	15	11	3	14	
MS					6
BY COLLEGE:					
COL OF AG, FOR & NAT RES MGT (BS)	18	25	26	25	33
Percent Change	33.3	38.9	4.0	-3.8	32.0
COL OF BUSINESS & ECONOMICS	62	59	53	62	69
Percent Change	21.6	-4.8	10.2	17.0	11.3
BA	8	10	11	9	9
BBA	54	49	42	53	60
COLLEGE OF ARTS & SCIENCES .....	406	469	406	501	477
Percent Change	10.9	15.5	13.4	23.4	-4.8
BA	317	371	316	375	371
BS	38	50	47	62	46
Professional Cert Ed	36	37	40	46	38
MA				4	16
MEd	15	11	3	14	

MS					6
KA HAKA 'ULA O KE'ELIKOLANI (BA)	16	26	12	26	13
Percent Change	60.0	62.5	53.8	116.7	50.0
BA	15	13	11	13	11
MA	1	2			
Post-baccalaureate Certificate		11	1	13	2

SOURCES: Computer Report 1454B. FY 2002-03 data from Student Information Management System (SIMS). FY 2003-04 data from Student Information Management System (SIMS) and Banner Operational Data Store (ODS). Effective FY 2004-05, data are from Banner Operational Data Store (ODS) Iro\_Degree.

**TABLE 14**  
**DEGREES EARNED, BY DIVISION AND PROGRAM**  
**UNIVERSITY OF HAWAI'I - WEST O'AHU**  
**FISCAL YEARS (July 1 to June 30) 2002-03 TO 2006-07**

DIVISION AND PROGRAM	2002-03	2003-04	2004-05	2005-06	2006-07
TOTAL	167	212	194	265	217
Percent Change	-6.7	26.9	8.5	36.6	18.1
BY DIVISION AND PROGRAM:					
HUMANITIES DIVISION	18	23	16	30	25
Hum-Hawn-Pac Studies (BA)	5	2	5	5	5
Hum-History (BA)	4	14	7	14	12
Hum-Literature (BA)	7	7	4	10	4
Hum-Philosophy (BA)	2			1	4
PROFESSIONAL STUDIES DIVISION	79	105	90	135	102
Business Administration	49	79	47	91	65
Accounting (BA)	27	38	18	40	24
Business Administration (BA)	22	41	29	51	41
Professional Studies	6				
Public Admin (BA-Prof St)	6				
Public Administration	24	26	43	44	37
Justice Admin (BA)	18	19	30	21	23
Public Admin (BA)	6	7	13	23	14
SOCIAL SCIENCES DIVISION	70	84	88	100	90
Soc Sci-Anthropology (BA)	7	4	4	6	4
Soc Sci-Economics (BA)	3	2	3	3	3
Soc Sci-Political Science (BA)	5	12	9	7	5



Soc Sci-Psychology (BA)	46	44	50	57	46
Soc Sci-Sociology (BA)	7	8	12	13	12
Soc Sci-Social Science (BA)	2	14	10	14	20

Note: Migration to a new student registration system took place in Fall 2003.

Source: Computer Report 1454B; University of Hawai'i - West O'ahu Student Services; FY 2002-03 and FY 2003-04 data from SIMS;

Effective FY 2004-05 data are from Banner Operational Data Store (ODS) Iro\_Degree.