

From: Leighton Chong [e-mail address redacted]
Sent: Wednesday, January 04, 2012 2:10 PM
To: SatelliteOffices
Subject: Public Comment: Hawaii as Potential Location for USPTO Satellite Office

To The Commissioner of Patents
U.S. Patent and Trademark Office
January 4, 2012

This submission is provided as public comment in response to the USPTO's proposal for potential additional locations for USPTO satellite offices, as noticed in Federal Register Notice 11-69 on November 29, 2011.

In May 2007, Director Dudas, Commissioner Doll, other USPTO officials, and senior officials of the other major patent offices (Europe, Japan, China, Korea and Australia) attended a multilateral patent office coordination conference in Honolulu, Hawaii, at the host invitation of then Hawaii Governor Linda Lingde. While there, the USPTO contingent met with Hawaii officials, members of the patent bar, and industry executives for a presentation of the suitability of Honolulu for a regional patent examining office to meet an important goal of the USPTO 2007-2012 Strategic Plan. An electronic copy of the 2007 presentation to USPTO is attached. Among the important advantages noted for locating such an office in Hawaii were these:

1. Hawaii has a large (~1600 per year), ethnically diverse pool of US-citizen science and engineering graduates and expat graduates residing in the US Mainland seeking high-level technical employment in Hawaii. Hawaii has a diverse mix of family-oriented social cultures where parents typically prefer that their children find employment and stay in Hawaii, and graduates forced to seek employment outside of Hawaii often want to return.
2. Hawaii's local pay scale for Sci&Engg graduates is about 30% lower than the USPTO pay scale for patent examiners, making patent examiner employment highly attractive and likely to have a strong retention rate for Hawaii examiners relative to local technology jobs (if they existed).
3. Hawaii has centers of technical excellence in biotech, agricultural tech, ocean and earth sciences, telemetry, communications, dual-use defense technologies, astronomy and renewable energy.
4. Hawaii is a preferred host venue for Asia-Pacific conferences on international patent and IP policies, often held at its unique East-West Center for International Studies, making Hawaii an ideal location for a far-West presence of the USPTO.

The USPTO's key criteria for locating a satellite office are deemed to be met as follows:

- (1) A Hawaii USPTO office location would provide a key asset for technology clustering (along with per-capita high levels of university and institutional research and strong U.S. Defense research presence) that would promote increased outreach activities to better connect local entrepreneurs and innovation companies with the USPTO
- (2) A Hawaii USPTO office would have strong relative advantages in pay scale incentives and patent examiner retention and provide an unmatched quality of life.
- (3) A Hawaii USPTO office would provide a large annual pool of qualified Sci&Engg candidates for recruitment of patent examiners.
- (4) A Hawaii USPTO office would stimulate and likely increase the filing of patent applications from Hawaii inventors.
- (5) Hawaii has strong technology competencies and assets in biotech, agricultural tech, ocean and earth sciences, telemetry, communications, dual-use defense technologies, astronomy and renewable energy that would improve quality of patent examination by examiners hired in Hawaii in these fields.
- (6) Hawaii currently has rentable office space at about 78% of capacity and at rent scales comparable to Arlington, Virginia.
- (7) The University of Hawaii system has about 44,000 matriculants annually, \$270 million per year in research funding, and strong technology competencies and assets

in biotech, agricultural tech, ocean and earth sciences, telemetry, communications, dual-use defense technologies, astronomy and renewable energy.

(8) Hawaii is home to a regional high-level biosafety laboratory, UH Cancer Research Center, Natural Energy Laboratory of Hawaii Authority (ocean water and renewable energy research), U.S. Defense space surveillance and supercomputing center, and Mauna Kea world astronomical observatories.

(9) A Hawaii USPTO office will likely stimulate technology entrepreneurs and innovation companies and have positive economic impacts in Hawaii, the Pacific island nations, and the Asia-Pacific region.

In summary, we believe that Hawaii would be an ideal location for a USPTO satellite office. Thank you for consideration of this mutually advantageous opportunity.

Yours truly,

Leighton K. Chong
IP & Patent Attorney
133 Kaai Street
Honolulu, HI 96821[phone redacted]

**Consideration for a USPTO Regional Office
in Honolulu, Hawaii**

**May 10, 2007
Hawaii State Capitol**





Hawaii's Top 10 List

1. Hawaii has a large, ethnically diverse pool of U.S. citizen science and engineering graduates each year
2. PTO pay scale is 30% higher than Hawaii's tech income level
3. Higher retention of Hawaii hires at a PTO regional office
4. Hawaii science and engineering graduates are highly qualified
5. Hawaii universities teach science areas of increasing importance to industry



Hawaii's Top 10 List

6. UH Shidler College proposes IP management electives open to tech students
7. UH Law School proposes certificate program in IP Law & Policy Studies
8. Honolulu office rates are comparable to rates in Alexandria, VA
9. Synergies of Hawaii research & tech industry with a PTO Regional Office
10. PTO Regional Office can enhance Hawaii as a preferred venue for Asia-Pacific IP conferences

Hawaii has a large, ethnically diverse pool of U.S. citizen tech graduates each year

- ❑ UH has 800+ grads with BS, MS, & PhDs in science & engineering per year
- ❑ Excluding 50% foreign students, about 400+ U.S. citizen tech grads per year are in PTO hiring pool
- ❑ Hiring pool at least 30% larger w/ returnees from Mainland
- ❑ PTO pay scale 30% higher than Hawaii tech income levels
- ❑ Many will apply as patent examiners in a Hawaii Regional Office

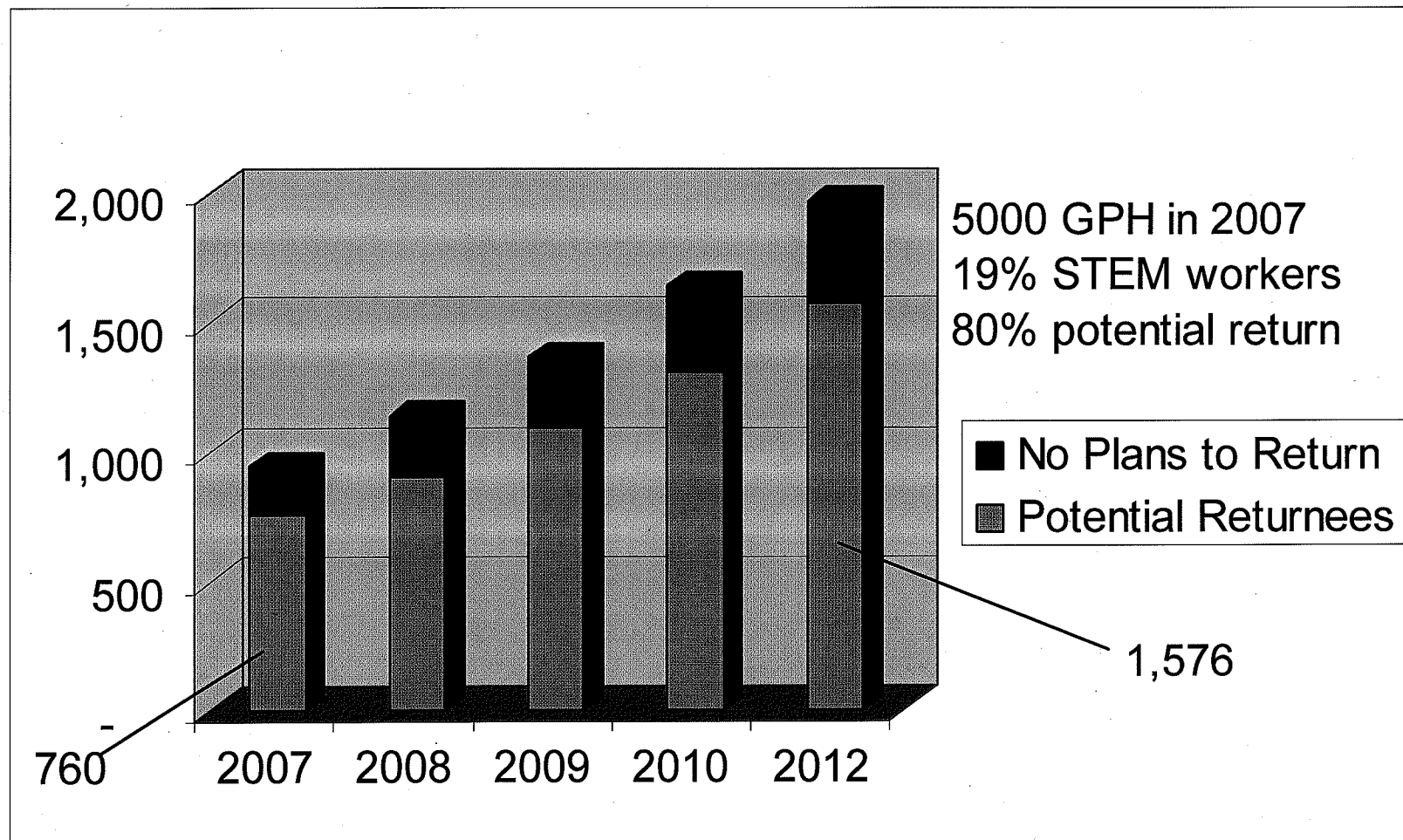
Degrees Earned 2005-06

Baccalaureate+ in STEM Fields

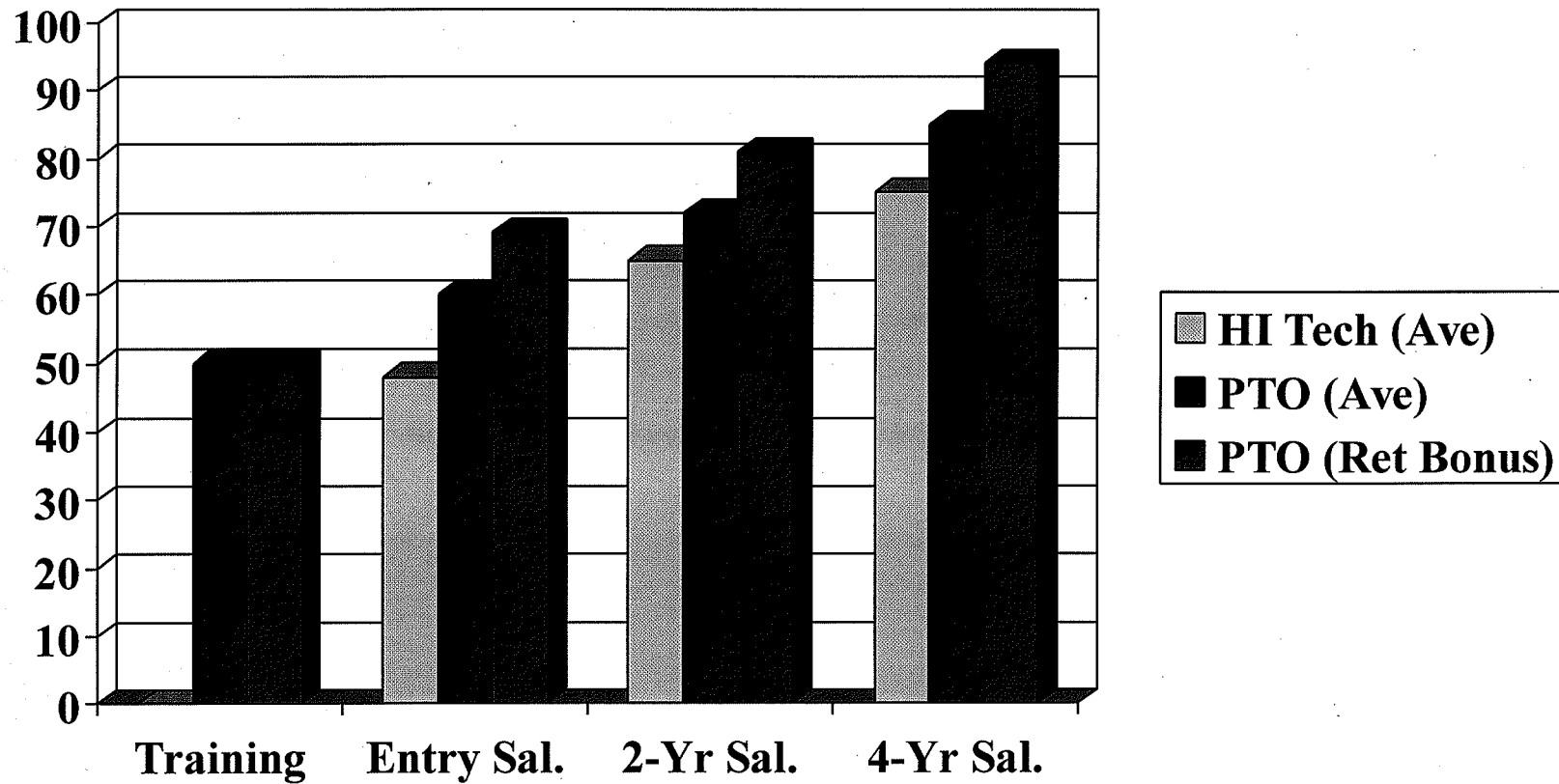
	<u>UH Manoa</u>	<u>UH Hilo</u>	<u>Total</u>
Natural Sciences	360	128	488
Ocean, Earth Science	57	0	57
Engineering	161	0	161
Agriculture/Bioengineering	82	25	107
<u>Health Sciences</u>	17	0	17
TOTAL	677	153	<u>830</u>

Source: University of Hawai'i Management and Planning Support Reports

Global Pau Hana: Science & Engineering projected skill pool



PTO pay scale is 30% higher than Hawaii's tech income level





Higher retention of Hawaii hires at a PTO regional office

- Hires at PTO regional office will remain in Hawaii due to family ties and Hawaii's incomparable lifestyle
- PTO pay scale will remain attractive compared to Hawaii tech pay levels
- PTO's higher pay scale means strong likelihood of retention for PTO hires
- Engineers in Hawaii's past "brain drain" to the U.S. Mainland desire to return to Hawaii for good-paying jobs here



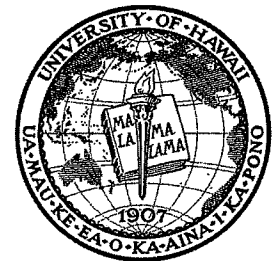
Hawaii tech grads are highly qualified; in science areas of increasing importance to industry

- UH is accredited and highly ranked in science and technology
- UH is ranked 25th nationally in Federal research funding for public universities
- UH excels in science areas of increasing importance nationally and globally
- Hawaii hiring pool in important science areas can staff special PTO examining groups in Regional Office

University of Hawaii College of Engineering

The College of Engineering has close to 900 students pursuing BS, MS, and PhD degrees, graduating around 160 annually in the following departments:

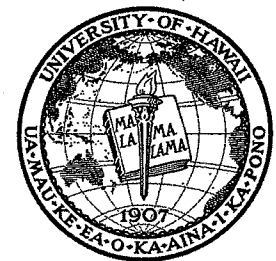
- Electrical Engineering
- Mechanical Engineering
- Civil and Environmental Engineering



UH College of Tropical Agriculture and Human Resources (CTAHR)

CTAHR conducts research and educational programs supporting tropical agricultural systems that foster viable communities, a diversified economy, and a healthy environment. Over 100+ graduate annually in:

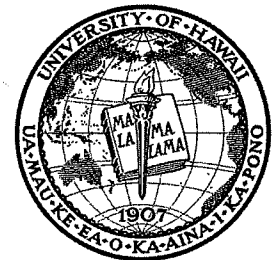
- Molecular Biosciences & Bioengineering
- Plant and Environmental Biotechnology Program
- Human Nutrition, Food & Animal Sciences
- Natural Resources & Environmental Management
- Tropical Plant & Soil Sciences



UH College of Natural Sciences

The University of Hawaii College of Natural Sciences has 450+ BS, MS and PhD graduates annually in:

- Information & Computer Science
- Chemistry
- Microbiology
- Biology
- Physics & Astronomy
- Mathematics
- Botany
- Zoology
- Ecology, Evolution & Conservation Biology



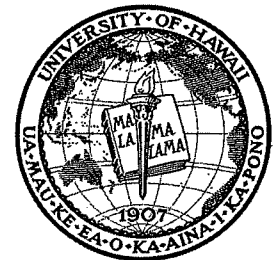
UH School of Ocean and Earth Science and Technology (SOEST)

Graduating over 50 BS, MS and PhDs a year SOEST
brings together 3 research institutes

- Institute of Natural Energy,
- Institute of Marine Biology,
- Institute of Geophysics and Planetology

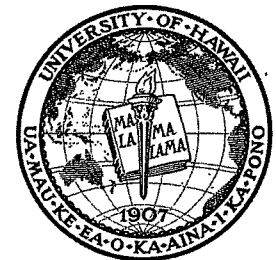
Plus 4 academic departments:

- Ocean and Resources Engineering
- Oceanography
- Geology & Geophysics
- Meteorology



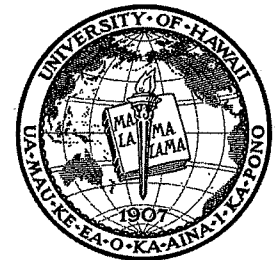
UH Shidler College proposes IP management courses open to tech students

- UH Shidler College of Business, Pacific Asia Management Institute (PAMI), proposes to offer a new certificate program in Intellectual Property Management, including Patenting
- Courses would be open to science and engineering students as electives
- PTO supervisory trainers and officials could be invited as guest lecturers to help shape curriculum
- Introduction to IP and patenting fields would create interest in patent examiner positions upon graduation



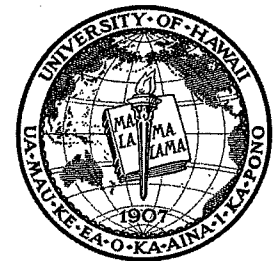
UH Shidler/ PAMI Certificate Program on Intellectual Property Management

1. Introduction to Intellectual Property
2. Fundamentals of IP Management
3. International IP Protections & Issues
4. Protecting Innovation Through Patenting
5. Special Topics in IP Protections & Issues
6. IP Licensing and Sale Transactions



UH Law School proposes certificate program in IP Law & Policy Studies

- Has considerable strengths and valuable contacts in the Asia-Pacific region
- Courses to be offered in the evening and/or online to accommodate employees working during the day
- PTO policy officials and policy experts invited as guest lecturers to help shape curriculum
- Patent examiners attending UH Law School better prepared for senior / career positions



Intellectual Property Law & Policy Studies

William S. Richardson
SCHOOL OF LAW

Intellectual and Intellectual Property Law
Certificate Program
First Proposed 2007

Track A
Intellectual Property Law
General
Concentration

Track B
Intellectual Property Law
Patent Law
Concentration

Intellectual Property Law Survey
Current Offering

Intellectual Property Licensing Law
Course Proposal Anticipated
Fall 2003

Media & Patent Law
Summer Offering

Intellectual Property Law
Current Offering

Intellectual Law & Policy
Current Offering

Intellectual Property Law Survey
Current Offering

Patent Prosecution & Enforcement
New Course Offering

Intellectual Property Law
Current Offering

Intellectual Property Licensing Law
Course Proposal Anticipated
Fall 2008

Government Contract Law
& Acquisition
Course Proposal Anticipated
Fall 2008

Intellectual Property Law & Policy Studies

William S. Richardson
SCHOOL OF LAW

International Intellectual Property Law
Certificate Program
Dean, Professor

Track C
Intellectual Property Law
Global & New Economy Issues
Concentration

Intellectual Property Law Survey
Current Offering

Intl Intellectual Property Law
Current Offering

Pacific Island Legal Systems
Current Offering

Six Genetic Legal Systems:
Governing Traditional Knowledge
Cultural Expression & Genetic Resources
New Course Offering

Intellectual Property Law
Current Offering

Track B
Intellectual Property Law
Intellectual Property Management
Concentration

Intellectual Property Law Survey
Current Offering

Fundamentals of Intellectual
Property Management
New Course Offering

Intl Intellectual Property Law
Current Offering

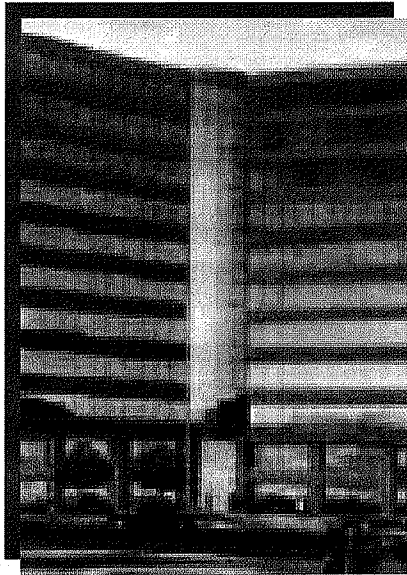
Strategic Innovation Technology
& IP Management Seminar
New Course Offering



Office rates in Honolulu are comparable to rates in Alexandria, VA

- Examples show Honolulu's commercial office rates comparable to rates in Alexandria
- New office space construction expected in suburban Honolulu areas in coming years
- Locating a PTO regional office in Honolulu likely to have the same or lower costs than expanding in Alexandria

Honolulu office space rents are comparable to those in Arlington, VA



Colonial Place II

2101 Wilson Blvd.
Arlington, VA 22201

GROSS RENTAL RATE:

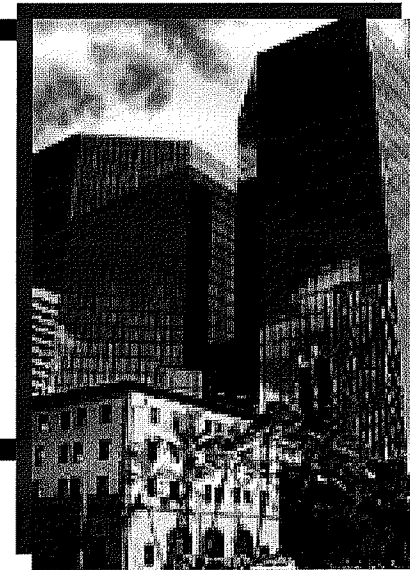
\$36/SF/YR

Pacific Guardian Center

737 & 733 Bishop Street
Honolulu, HI 96813

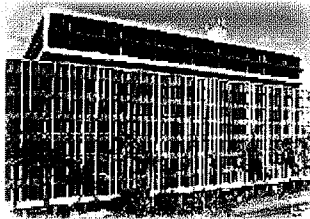
GROSS RENTAL RATE:

\$35/SF/YR

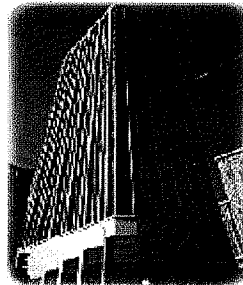


Multiple Office Alternatives

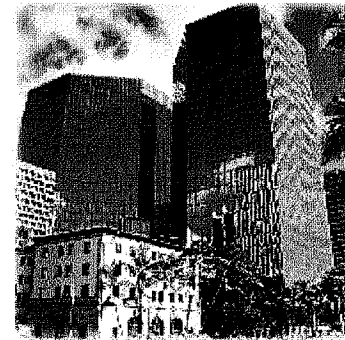
Existing + Planned



**677
Ala
Moana**



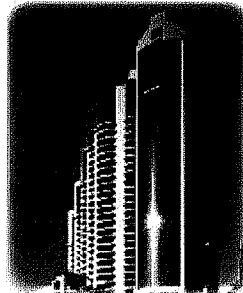
**City
Financial
Tower**



**Pacific
Guardian
Center**



**Airport
Industrial
Park
(AIPA)**



**Harbor
Court**



**Waiakamilo
Business
Center**



**Bishop
Place**



**Kaimuki
Plaza**



**Kapolei
Buildings
(3 office
projects
planned)**



**Mililani
Tech
Park
(1 office
building
planned)**

Synergies of Hawaii's research & tech industry with PTO regional office

- Bringing increased IP awareness to Hawaii
- Mutual benefits of a Hawaii regional PTO office
- 50% foreign tech grads in Hawaii can provide foreign technical translation resources
- PTO regional office could provide catalyst for holding international IP conferences in Hawaii

Increased IP Awareness in Hawaii

- Current low level of IP awareness in Hawaii
 - Hawaii's patent application filing rate is 25% per capita of national average
 - Lack of familiarity with value of patent filings
- Regional Patent Office can raise IP awareness
 - University graduates becoming patent examiners
 - Tech community interactions with the USPTO
 - Creating a Silicon Valley-type IP climate



Mutual Benefits of a Regional Office

- USPTO
 - Patent examiners could access expertise and publications of tech industry in forefront areas
- Hawaii Technology Companies
 - USPTO presence supports increased IP awareness
- Research Institutions
 - Universities
 - University of Hawaii,
 - Chaminade,
 - BYUH,
 - Hawaii Pacific University
 - Government research organizations



Foreign Tech Grads Can Provide Technical Translation Resources

- Multilingual technical
 - UH technical graduates of foreign citizenship
 - Relocation to Hawaii may be easier for others
- Assist the USPTO
 - Translations
 - Development of foreign prior art databases



PTO Regional Office can enhance Hawaii as a preferred venue for Asia-Pacific IP conferences

- Hawaii is ideal location for Asia-Pacific IP events
 - Conferences on IP issues
 - Multilateral Asia-Pacific treaty negotiations
 - Alternate dispute resolution of international IP disputes
- USPTO regional office
 - Far Western US presence for PTO
 - Bring PTO guest speakers and officials to Hawaii
 - Asia-Pacific outreach for PTO and PCT events



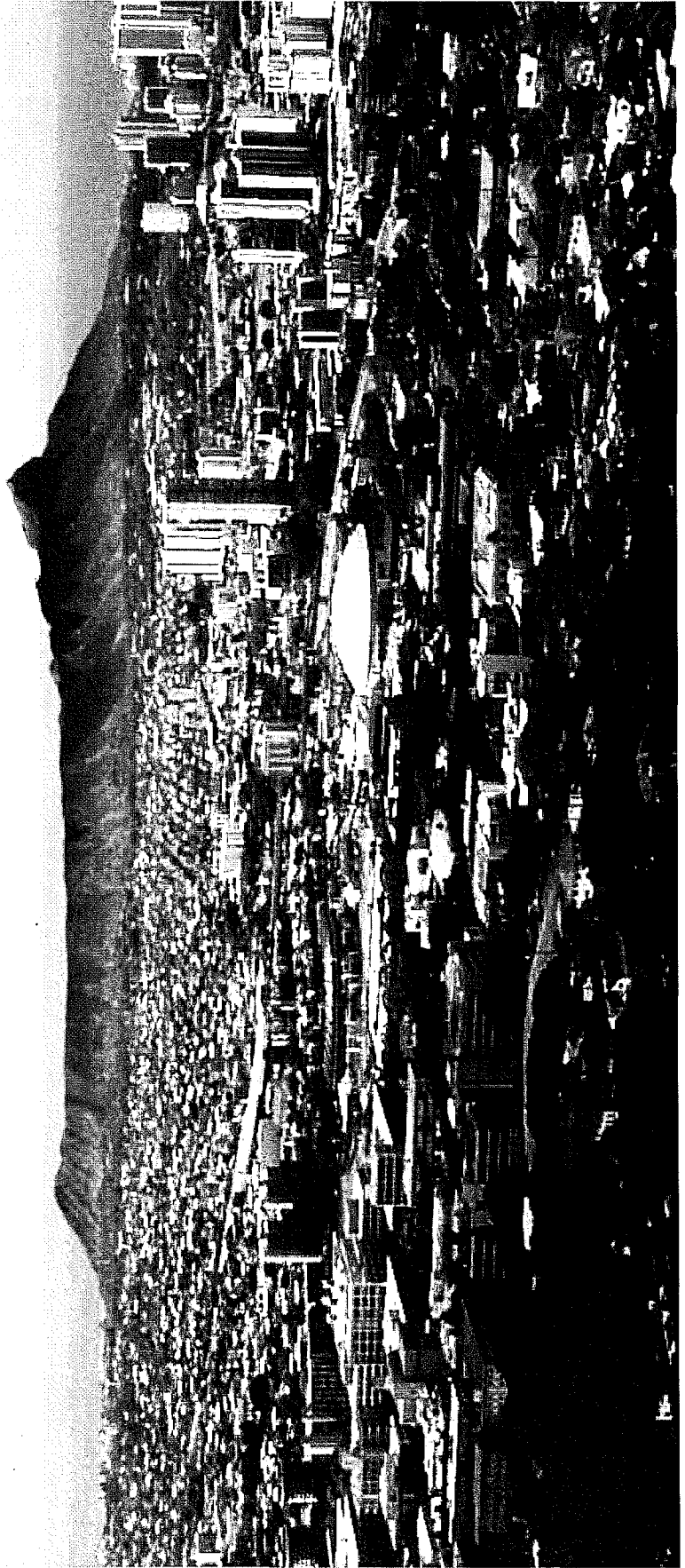
Hawaii has geographic, time zone and host venue advantages for Asia-Pacific IP conferences

- ❑ Hawaii is already home to many international organizations and unique assets including: The East-West Center, the Asia-Pacific Center for Security Studies, U.S. Pacific Command, The Pacific Disaster Center, etc.
- ❑ Hawaii's central location, time zone, ease of communications, and excellent connectivity make it easy to do business globally
- ❑ Hawaii has first class conference and business facilities
- ❑ Ethnically, Hawaii is the global melting pot
- ❑ Hawaii is seen as a "neutral" meeting place
- ❑ Hawaii has the Spirit of Aloha



Mahalo





Supplemental Materials



Michael Rota
Associate Vice President for Academic Affairs
Office of the Vice President for Community Colleges
University of Hawai`i System



Locating USPTO Jobs in Hawaii – Workforce Issues

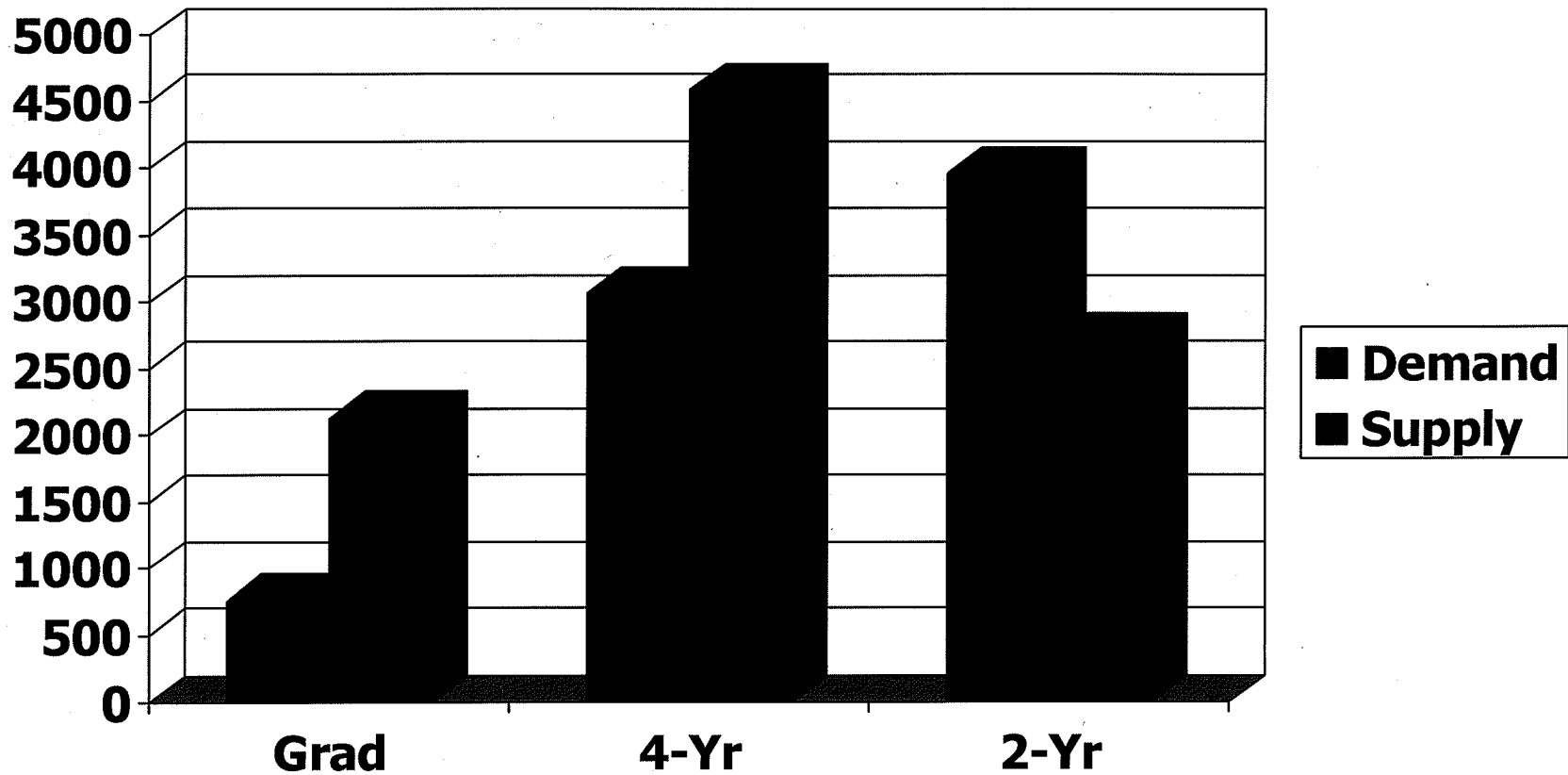
- Can you find a pool of qualified applicants to start your operation? YES**

- Do you have access to a steady pipeline of qualified job applicants in the future? YES**

- Given the local employment market, can you expect to retain qualified employees? YES**

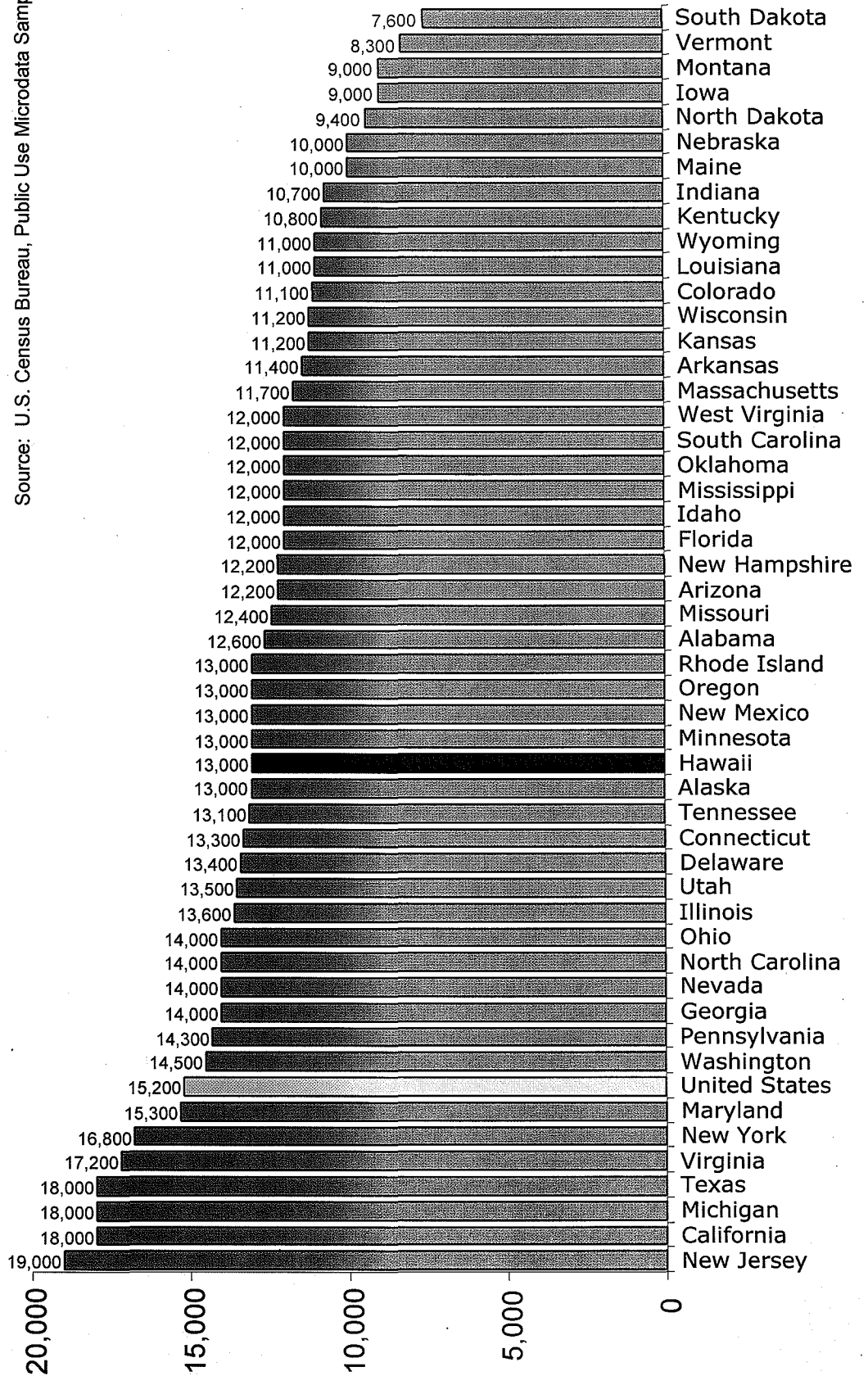
Jobs & Entry Education Required

Demand/Supply Gap 2005




Hawaii Pay for Individuals With a Bachelor's Degree is Below the U.S. Average

Source: U.S. Census Bureau, Public Use Microdata Samples, 2000




Annual Hawai`i STEM Jobs to Fill 2006-2017

<u>SOC Clusters</u>	<u>Jobs</u>
❑ Computer and mathematical science occupations	300
❑ Architecture and engineering occupations	188
❑ Life, physical, and social science occupations	43
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❑ Total Jobs to Fill Annually	<u>531</u>



The University of Hawaii is a major national resource for scientific research and education

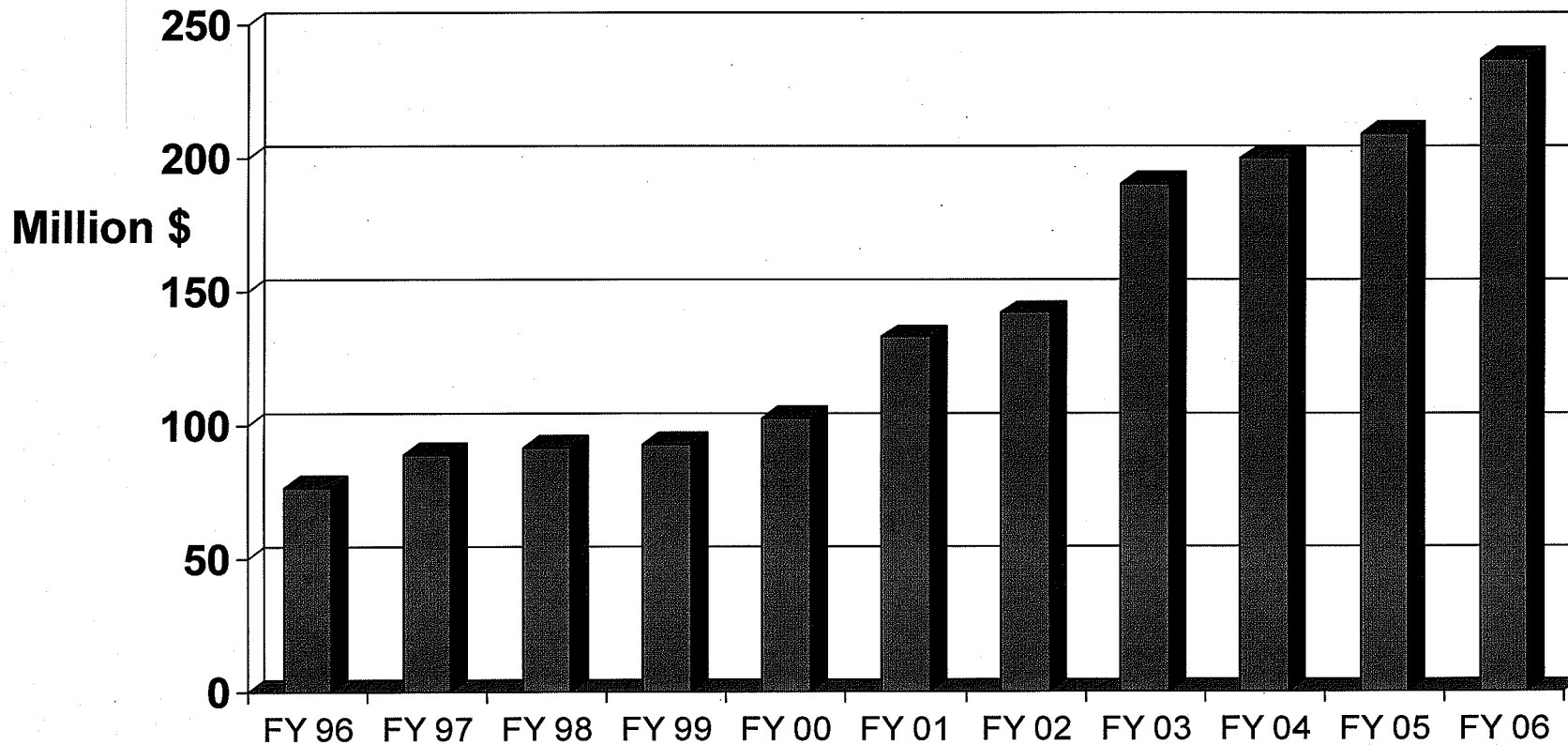
- Engineering**
- Natural Sciences**
- Ocean Sciences and Engineering**
- Health Sciences**
- Astronomy**
- Tropical Agriculture/Bioengineering**



UH Manoa Ranked 25th Nationally among Public Universities for Federal Expenditures on Research (FY 2004)

- The Institute for Astronomy brought in over \$22 million a year in extramural funds**
- The John A. Burns School of Medicine received \$20 million in NIH awards in FY 2005.**
- The School of Ocean and Earth Science and Technology received a record \$73.6 million in extramural support in FY 2005**

UH Research Funding Reached Record \$236.7 Million in FY 2006



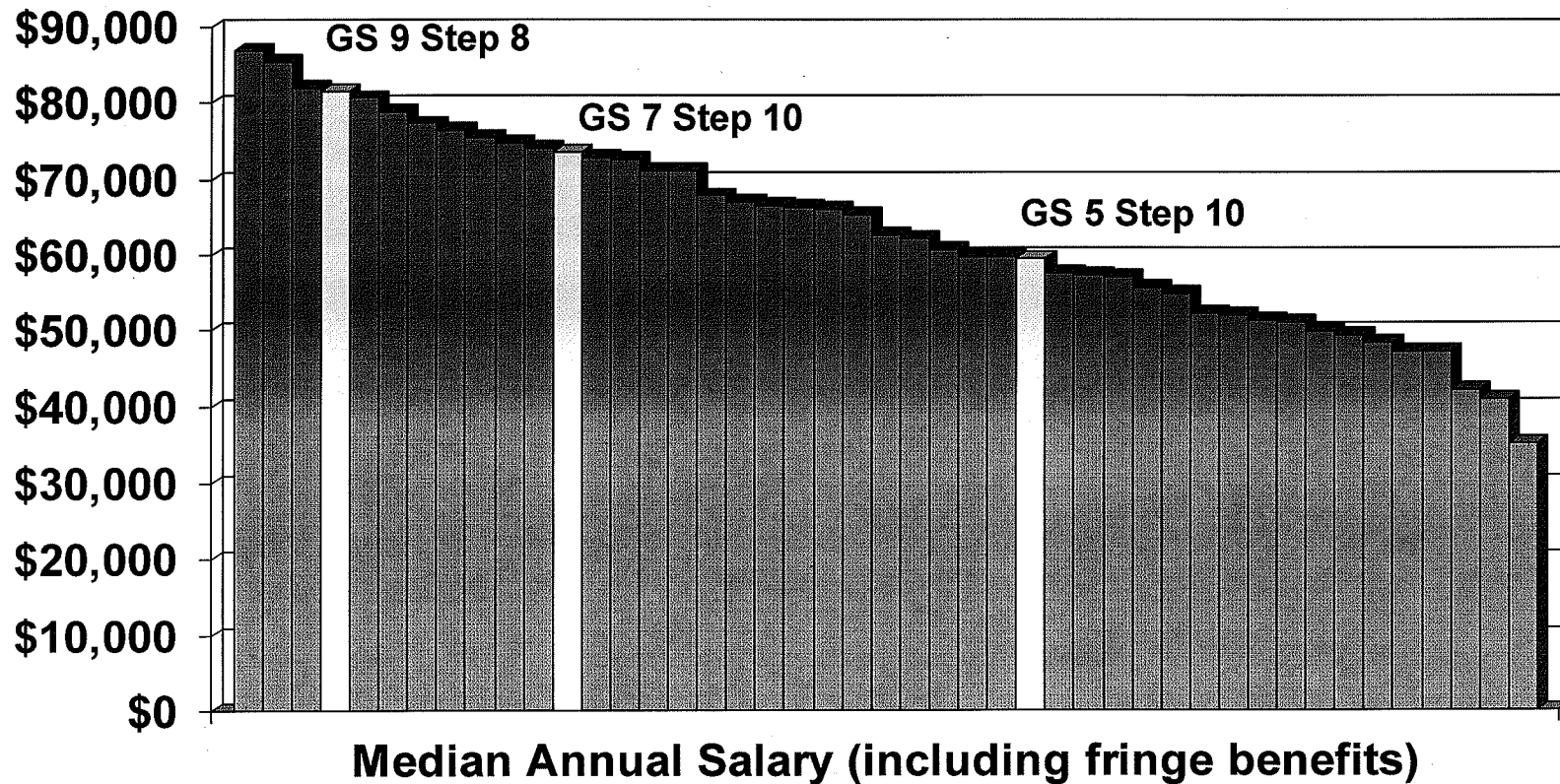
Degrees Earned 2005-06

Baccalaureate+ in STEM Fields

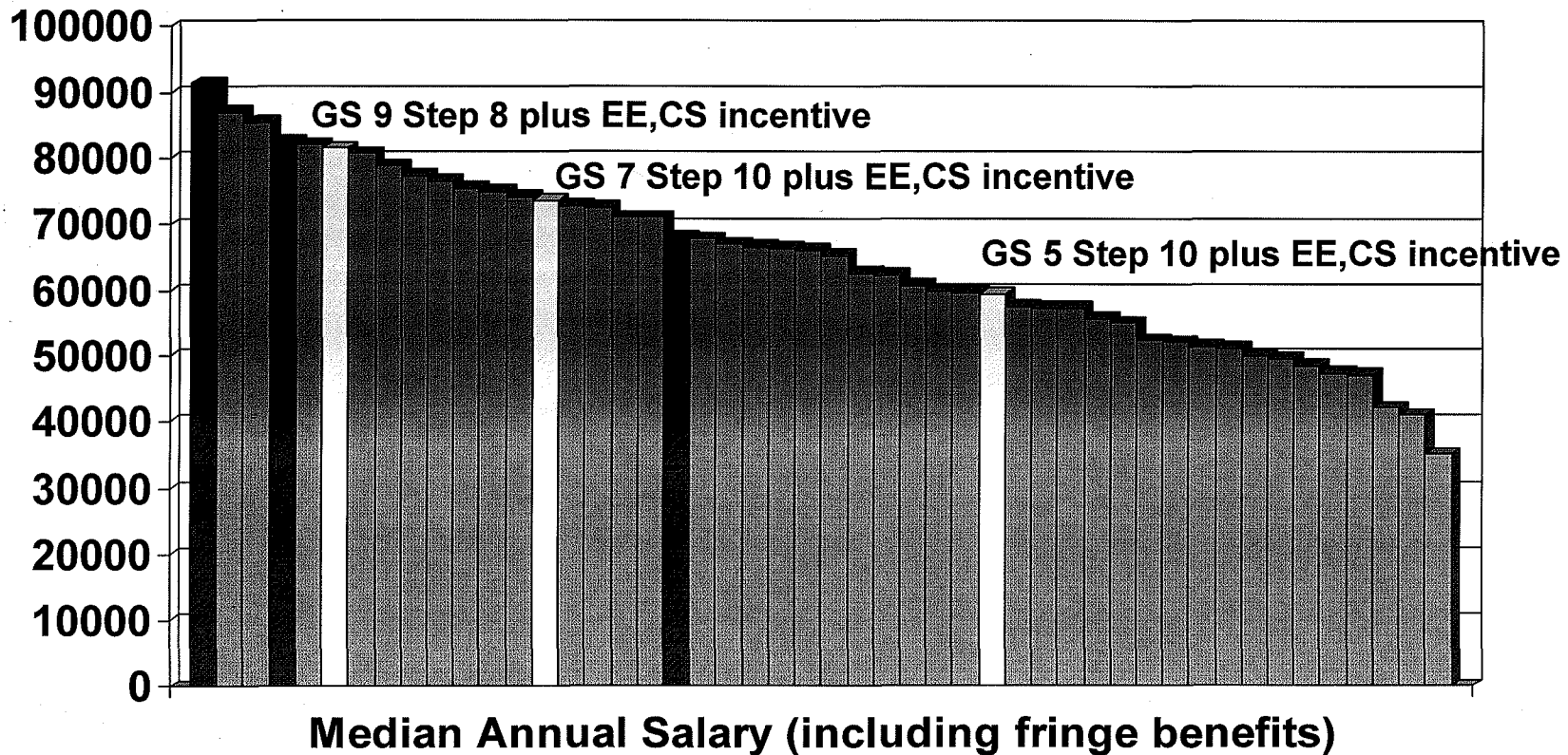
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TOTAL	677	153	<u>830</u>

Source: University of Hawai'i Management and Planning Support Reports

Salaries for Hawaii STEM Jobs That Require a Baccalaureate Degree for Entry

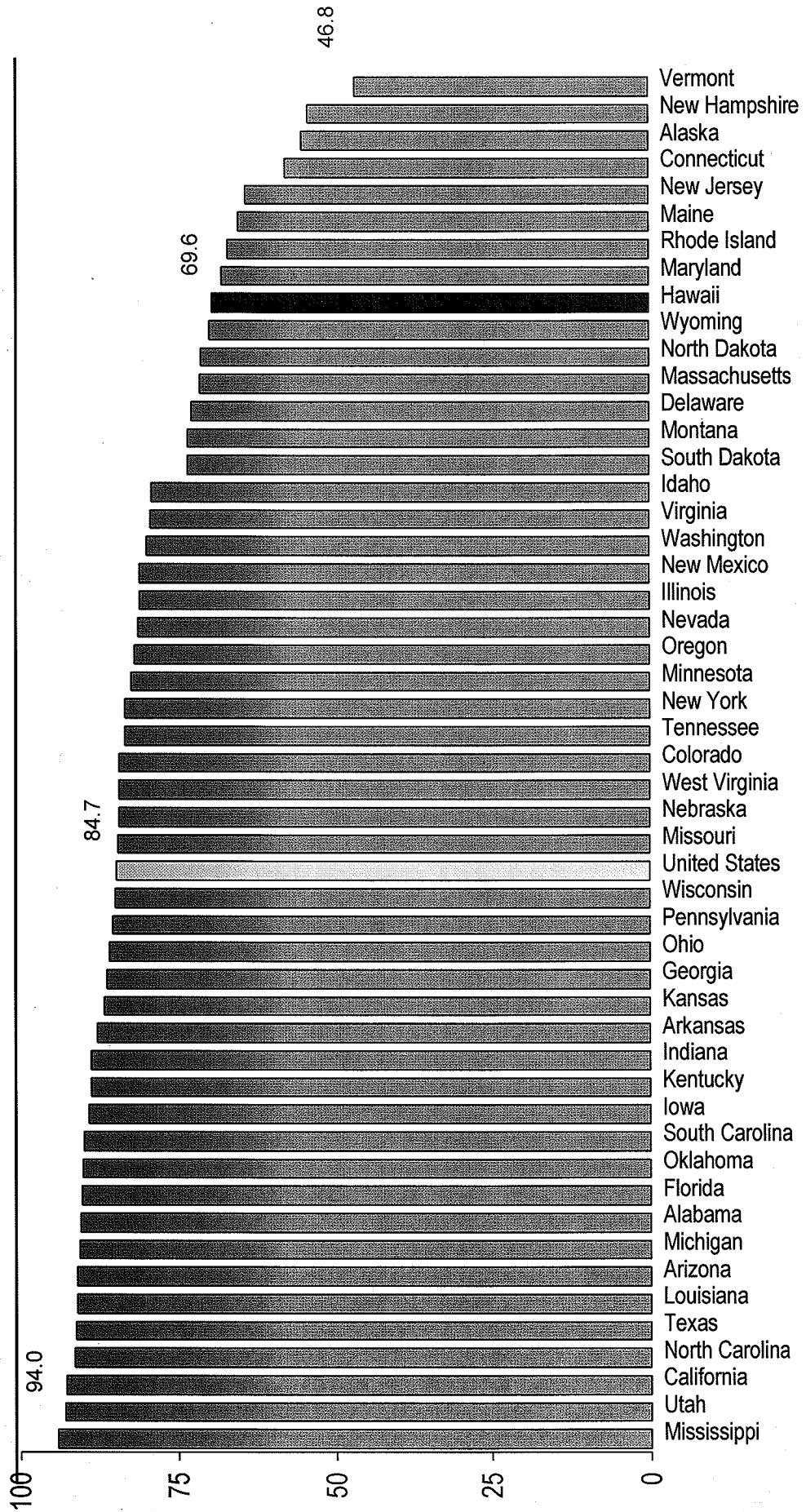


Salaries for Hawaii STEM Jobs That Require a Baccalaureate Degree for Entry



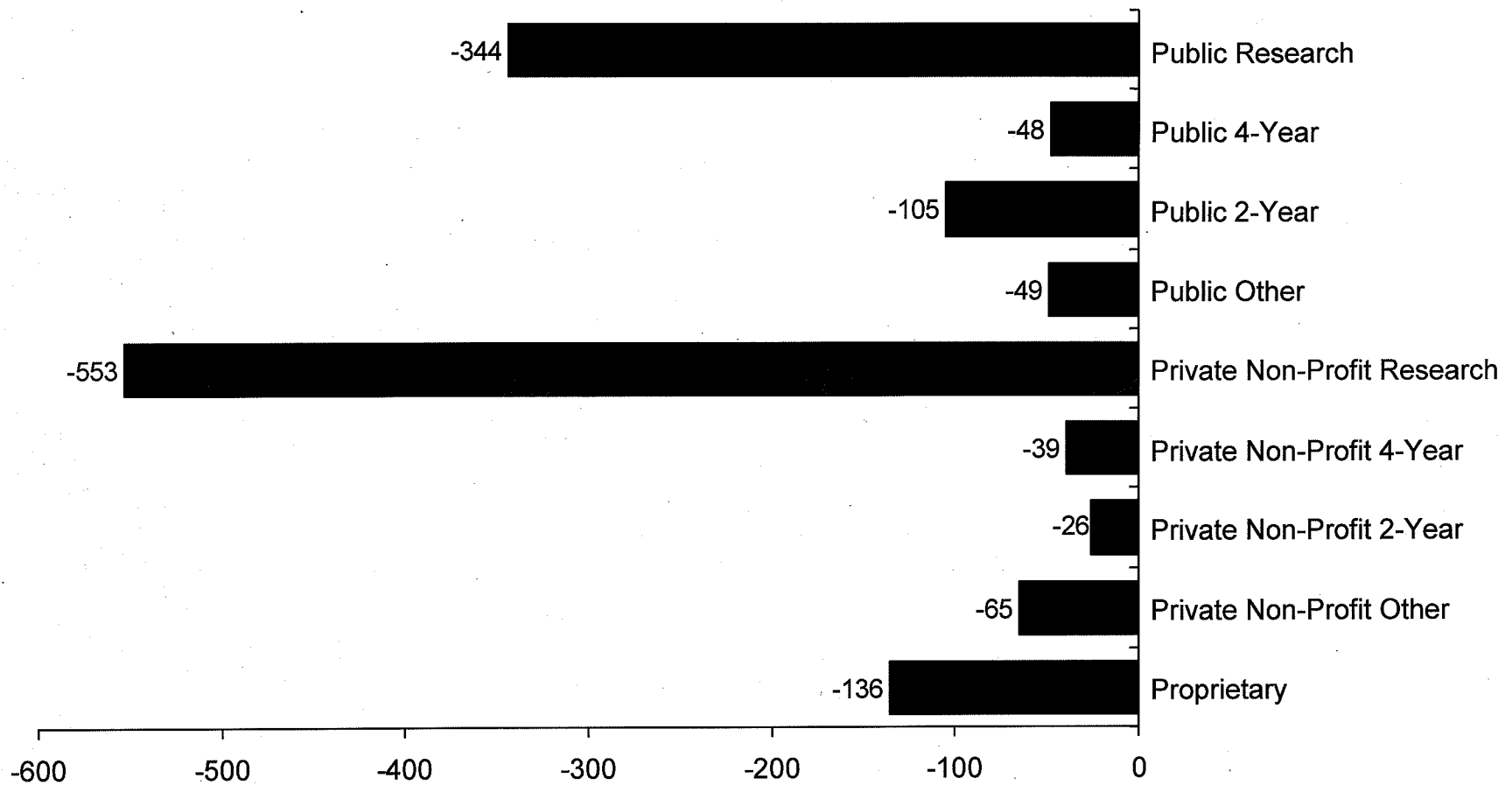
Source: Economic Modeling Specialists, Inc. • 4/07

Percent of First-Time Freshmen Who Attend College Within Their Reported State of Residence, Fall 2002



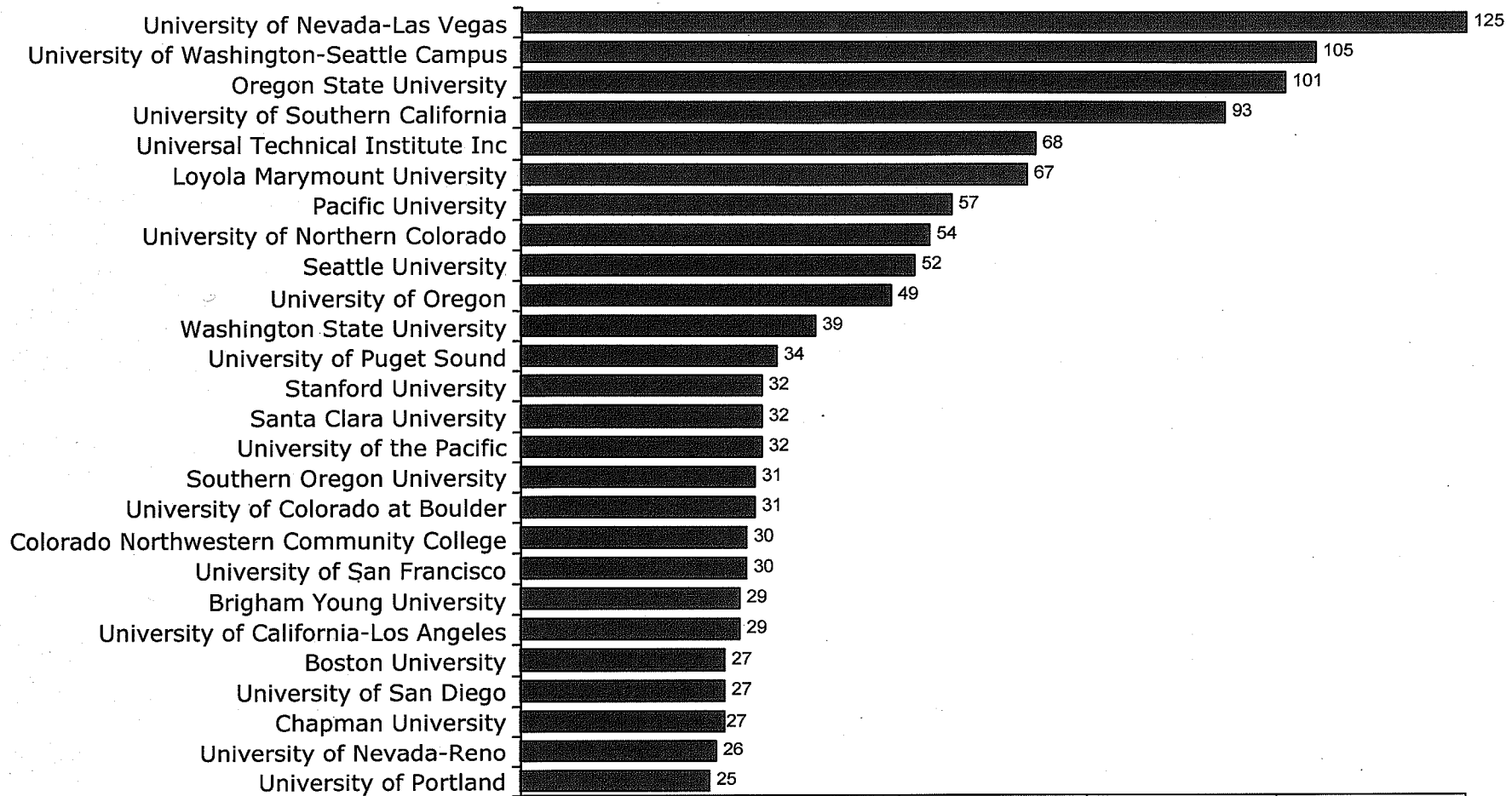
Source: NCES, IPEDS Fall 2002 Residency and Migration File

Net Imports of First-Time Freshmen



Source: U.S. Census Bureau, 2000 Census

Out-of-State Institutions in Which Hawaii Students Enroll



Source: U.S. Census Bureau, 2000 Census; 5% PUMS Files

Occupation Data by Education Level and Median Annual Pay

Region: State of Hawaii

Jobs in STEM Fields Requiring a Baccalaureate Degree or Higher for Entry

SOC Code	Description	2006 Jobs	2017 Jobs	New Jobs	Replacement Jobs	Annual Jobs to Fill	Median Annual Pay
17-2121	Marine engineers and naval architects	92	92	0	46	4	\$66,954
17-2171	Petroleum engineers	44	46	2	16	2	\$65,359
17-2011	Aerospace engineers	267	266	19	73	8	\$81,990
17-2061	Computer hardware engineers	308	333	25	56	7	\$60,679
19-2021	Atmospheric and space scientists	75	78	3	33	3	\$78,776
15-2011	Actuaries	56	63	7	26	3	\$77,296
	Patent Examiner (GS8 Step 8 plus EE,CS Incentive)						\$77,233
19-2012	Physicists	94	93	(1)	33	3	\$76,833
17-2161	Nuclear engineers	76	76	(2)	26	2	\$76,492
17-2072	Electronics engineers, except computer	658	697	39	142	16	\$75,475
17-2199	Engineers, all other	523	566	45	110	14	\$74,663
17-2041	Chemical engineers	99	109	10	33	4	\$74,124
15-1032	Computer software engineers, systems software	1,004	1,279	275	109	35	\$72,791
17-2071	Electrical engineers	543	590	47	117	15	\$72,518
19-2011	Astronomers	95	100	5	34	4	\$71,930
19-2099	Physical scientists, all other	162	176	14	41	5	\$71,062
17-2141	Mechanical engineers	466	524	38	146	17	\$71,055
	Patent Examiner (GS7 Step 10 plus EE,CS Incentive)						\$69,642
19-1021	Biochemists and biophysicists	61	69	8	21	3	\$68,079
17-2061	Environmental engineers	346	392	44	65	10	\$67,856
	Patent Examiner (GS9 Step 8)						\$67,333
19-2032	Materials scientists	30	31	1	11	1	\$67,013
15-1051	Computer systems analysts	2,419	2,939	520	301	75	\$66,578
17-2131	Materials engineers	81	96	15	24	4	\$66,274
17-2112	Industrial engineers	110	127	17	29	4	\$66,141
19-2042	Geoscientists, except hydrologists and geographer	125	129	4	24	3	\$65,616
17-2151	Mining and geological engineers, including mining	21	22	1	7	1	\$65,274
19-1029	Biological scientists, all other	261	265	24	90	10	\$62,656
17-2051	Civil engineers	2,335	2,431	96	409	46	\$62,281
	Patent Examiner (GS7 Step 10)						\$60,854
15-1031	Computer software engineers, applications	842	1,133	291	91	35	\$60,654

Occupation Data by Education Level and Median Annual Pay

Region: State of Hawaii

Jobs In STEM Fields Requiring a Baccalaureate Degree or Higher for Entry

SOC Code	Description	2006 Jobs	2017 Jobs	New Jobs	Replacement Jobs	Annual Jobs to Fill	Median Annual Pay
19-1013	Soil and plant scientists	144	150	6	28	3	\$59,767
17-2031	Biomedical engineers	103	109	6	19	2	\$59,682
15-2031	Operations research analysts	210	215	5	51	5	\$59,645
15-2099	Mathematical scientists, all other	21	21	0	5	0	\$58,423
	Patent Examiner (GS5 Step 10 plus EE,CS Incentive)						\$57,576
19-1012	Food scientists and technologists	32	36	4	6	1	\$57,514
17-2111	Health and safety engineers, except mining safety	128	134	8	34	4	\$57,228
19-1031	Conservation scientists	130	133	3	42	4	\$57,149
15-1011	Computer and information scientists, research	221	243	22	28	5	\$57,144
19-1042	Medical scientists, except epidemiologists	255	310	55	49	9	\$56,712
19-1099	Life scientists, all other	41	47	6	8	1	\$55,693
15-1071	Network and computer systems administrators	1,289	1,678	389	157	50	\$54,979
19-2043	Hydrologists	54	59	5	10	1	\$54,213
15-2041	Statisticians	199	201	2	58	5	\$52,343
19-1023	Zoologists and wildlife biologists	134	140	6	46	5	\$52,269
15-1061	Database administrators	324	427	103	37	13	\$52,030
17-1011	Architects, except landscape and naval	1,114	1,072	(42)	140	9	\$51,379
15-1061	Network systems and data communications analysts	1,191	1,668	477	154	57	\$51,059
19-2041	Environmental scientists and specialists, including	660	709	49	129	16	\$50,123
15-1021	Computer programmers	1,690	1,615	(75)	439	33	\$49,639
17-2021	Agricultural engineers	76	73	(3)	28	2	\$49,414
	Patent Examiner (GS5 Step 10)						\$49,133
17-1012	Landscape architects	347	339	(8)	44	3	\$48,434
19-2031	Chemists	201	205	4	72	7	\$47,278
17-1022	Surveyors	273	277	4	103	10	\$47,073
19-1022	Microbiologists	91	99	8	31	4	\$46,642
19-1041	Epidemiologists	21	21	0	4	0	\$44,066
19-1032	Foresters	55	58	3	17	2	\$42,119
17-1021	Cartographers and photogrammetrists	106	106	0	40	4	\$40,995
19-1011	Animal scientists	16	17	1	3	0	\$35,139
		20,345	22,923	2,585	3,899	589	\$61,080

Occupation Data by Education Level and Median Annual Pay

Region: State of Hawaii

Jobs In STEM Fields Requiring a Baccalaureate Degree or Higher for Entry

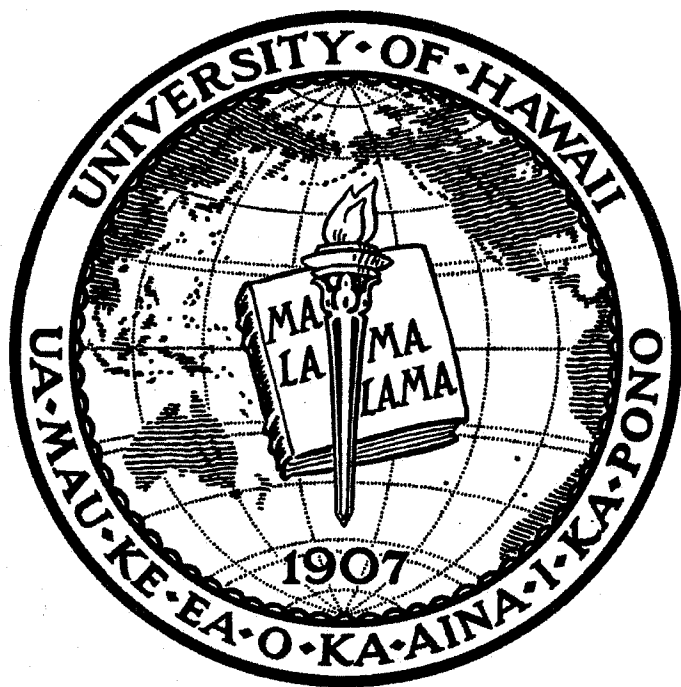
SOC Code	Description	2006 Jobs	2017 Jobs	New Jobs	Replacement Jobs	Annual Jobs to Fill	Median Annual Pay
19-1013	Soil and plant Scientists	144	150	6	28	3	\$59,787
17-2031	Biomedical engineers	103	109	6	19	2	\$59,682
15-2031	Operations research analysts	210	215	5	51	5	\$59,645
15-2099	Mathematical scientists, all other	21	21	0	5	0	\$58,423
	Patent Examiner (GS5 Step 10 plus EE,CS Incentive)						\$57,578
19-1012	Food scientists and technologists	32	36	4	6	1	\$57,514
17-2111	Health and safety engineers, except mining safety	126	134	8	34	4	\$57,228
19-1031	Conservation scientists	130	133	3	42	4	\$57,149
15-1011	Computer and information scientists, research	221	243	22	28	5	\$57,144
19-1042	Medical scientists, except epidemiologists	255	310	55	49	9	\$56,712
19-1099	Life scientists, all other	41	47	6	8	1	\$55,693
15-1071	Network and computer systems administrators	1,269	1,676	389	157	50	\$54,979
19-2043	Hydrologists	54	59	5	10	1	\$54,213
15-2041	Statisticians	199	201	2	58	5	\$52,343
19-1023	Zoologists and wildlife biologists	134	140	6	46	5	\$52,269
15-1061	Database administrators	324	427	103	37	13	\$52,030
17-1011	Architects, except landscape and naval	1,114	1,072	(42)	140	9	\$51,379
15-1081	Network systems and data communications analysts	1,191	1,668	477	154	57	\$51,059
19-2041	Environmental scientists and specialists, including	660	709	49	129	16	\$50,123
15-1021	Computer programmers	1,690	1,615	(75)	439	33	\$49,639
17-2021	Agricultural engineers	76	73	(3)	26	2	\$49,414
	Patent Examiner (GS5 Step 10)						\$49,133
17-1012	Landscape architects	347	339	(8)	44	3	\$48,434
19-2031	Chemists	201	205	4	72	7	\$47,278
17-1022	Surveyors	273	277	4	103	10	\$47,073
19-1022	Microbiologists	91	99	8	31	4	\$46,642
19-1041	Epidemiologists	21	21	0	4	0	\$44,086
19-1032	Foresters	55	58	3	17	2	\$42,119
17-1021	Cartographers and photogrammetrists	106	106	0	40	4	\$40,995
19-1011	Animal scientists	16	17	1	3	0	\$35,139
		20,345	22,923	2,585	3,899	589	\$61,080

ETHNIC BACKGROUND OF CREDIT STUDENTS, BY CAMPUS
UNIVERSITY OF HAWAII
FALL 2005



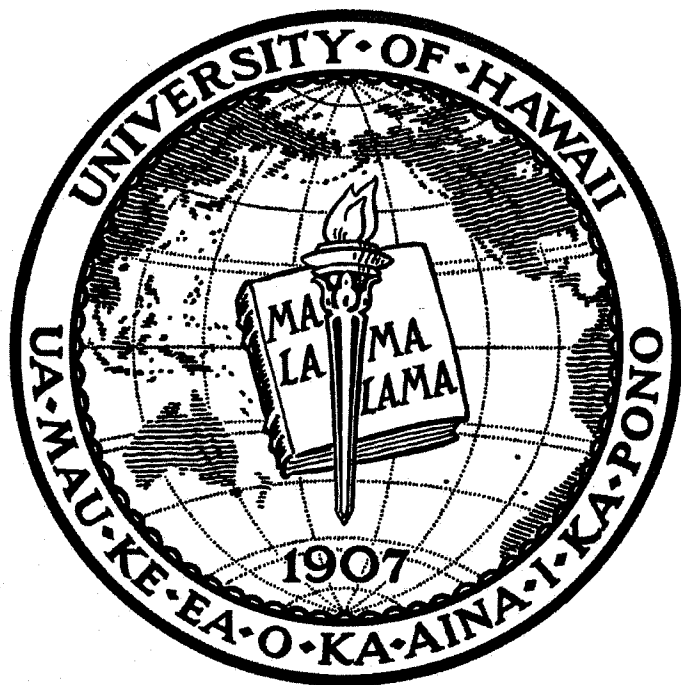
	UH MĀNOA		UH HILO	
	No.	V%	No.	V%
TOTAL	20,644	100.0	3,422	100.0
Asian / Pacific Islander	11,782	57.1	1,586	46.3
Asian	8,391	40.6	739	21.6
Chinese	1,604	7.8	67	2.0
Filipino	1,556	7.5	177	5.2
Indian Subcontinent	110	0.5	3	0.1
Japanese	3,810	18.5	396	11.6
Korean	789	3.8	77	2.3
Laotian	20	0.1	2	0.1
Thai	55	0.3	0	0.0
Vietnamese	171	0.8	3	0.1
Other Asian	276	1.3	14	0.4
Hawaiian or Pacific Islander	2,370	11.5	756	22.1
Guamanian or Chamorro	65	0.3	3	0.1
Hawaiian / Part-Hawaiian	1,721	8.3	547	16.0
Micronesian	49	0.2	53	1.5
Samoaan	251	1.2	10	0.3
Tongan	17	0.1	0	0.0
Other Pacific Islander	183	0.9	131	3.8
Mixed Pacific Islander	84	0.4	12	0.4
Mixed Asian / Pacific Islander	1,021	4.9	91	2.7
Hispanic	463	2.2	92	2.7
Puerto Rican	21	0.1	4	0.1
Other Hispanic	399	1.9	44	1.3
Mixed Hispanic	43	0.2	44	1.3
Caucasian	5,454	26.4	1,297	37.9
Middle Easterner	10	<0.1	0	0.0
Portuguese	35	0.2	33	1.0
Other Caucasian	5,409	26.2	1,264	36.9

University of Hawai'i System
 Degrees Awarded in STEM Fields 2005-06



	UH Manoa	UH Hilo	Total
College of Arts & Sciences			
Natural Sciences	360	128	488
Astronomy (BS)	n/a	15	
Biology (BA)	67	17	
Biology (BS)	34	8	
Botany (BA)	7		
Botany (BS)	1		
Botany (MS,PhD) 5/	15		
Chemistry (BA)	12	4	
Chemistry (BS,MS,PhD)	11		
Geology (BA)	n/a	3	
Geology (BS)	n/a	8	
Computer Sci (BS,MS,PhD) 6/	43	12	
Info & Computer Sci (BA,MS) 8/	22		
Library & Info Science (MLISC)	49		
Marine Biology (BS)	5		
Marine Science (BA)	n/a	33	
Mathematics (BA)	11	18	
Mathematics (BS,MA,PhD)	8		
Microbiology (BA)	4		
Microbiology (BS,MS,PhD)	20		
Natural Science (BA)	n/a	8	
Astronomy (MS,PhD)	7		
Physics (BS,MS,PhD)	11		
Physica (BA)	n/a	2	
Zoology (BA)	12		
Zoology (BS,MS,PhD)	21		
Sch of Ocean, Earth Science & Tech	57	0	57
Geology (BA)	3		
Geology-Geophysics (BS,MS,PhD)	15		
Meteorology (BS,MS,PhD)	8		
Ocean & Resources Eng (MS,PhD)	9		
Global Env Sci (BS)	9		
Oceanography (MS,PhD)	13		
	57		
College of Engineering	161	0	161
Civil Engineering (BS,MS,PhD)	48		
Electrical Engineering (BS,MS,PhD)	83		
Mechanical Engineering (BS,MS,PhD)	30		

**University of Hawai'i System
Degrees Awarded in STEM Fields 2005-06**



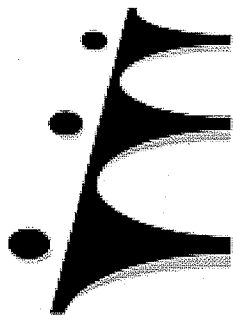
	UH Manoa	UH Hilo	Total
College of Trop Ag & Human Res	82	25	107
Agriculture (BS)	n/a	25	
Animal Science (BS,MS)	8		
Food Sci & Hum Nutr (BS)	14		
Food Science (MS)	1		
Nutritional Science (MS)	3		
Bioengineering (BS,MS)	3		
Molecular Biosci / Bioeng (MS, PhD)	11		
Ag & Resource Econ (BS,MS,PhD)	2		
Natural Res & Env Mgt (BS, MS, PhD)	19		
Plant & Environ Biotech (BS)	3		
Entomology (MS,PhD)	2		
Plant & Env Protect Sci (BS)	1		
Tropical Plant Pathology (MS,PhD)	1		
Horticulture (BS,MS,PhD)	3		
Trop Plant & Soil Sci (BS, MS, PhD)	11		
School of Medicine	17	0	17
Medical Technology (BS)	8		
Cell & Molecular Biology (MS,PhD)	4		
Genetics (MS,PhD)	1		
Physiology (MS,PhD)	4		
TOTAL	677	153	830



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PeopleBridge

Global Pau Hana Data

May 10, 2007
Hawaii State Capitol



Global Pau Hana Data

- Global Pau Hana is an online community for people from Hawaii who reside all over the world. It is a service of People Bridge. You may view the site at <http://globalpauhana.org>.
- Membership data for GPH has been taken from an optional questionnaire each member fills out to join.
- People Bridge builds online social network communities and has close to 100 installations. CEO Dave Kozuki may be contacted at 650-278-1443. dave@thepeoplebridge.com



Global Pau Hana Data

- The Global Pau Hana online community has been live for 3 years and has over 5,000 members.
- Profile questions are asked (optional) when joining and can be changed at any time. Of those who responded to “industry” and/or “title” questions, 19% are in Science or Engineering.
- Overall, based upon the profile questions, approximately 80% have a strong affinity to Hawaii and would likely consider a move back given the right opportunity.
- A 2002 HCCNC (Hawaii Chamber of Commerce of Northern California) survey asking “do you have plans to return to Hawaii” received 79% positive responses.

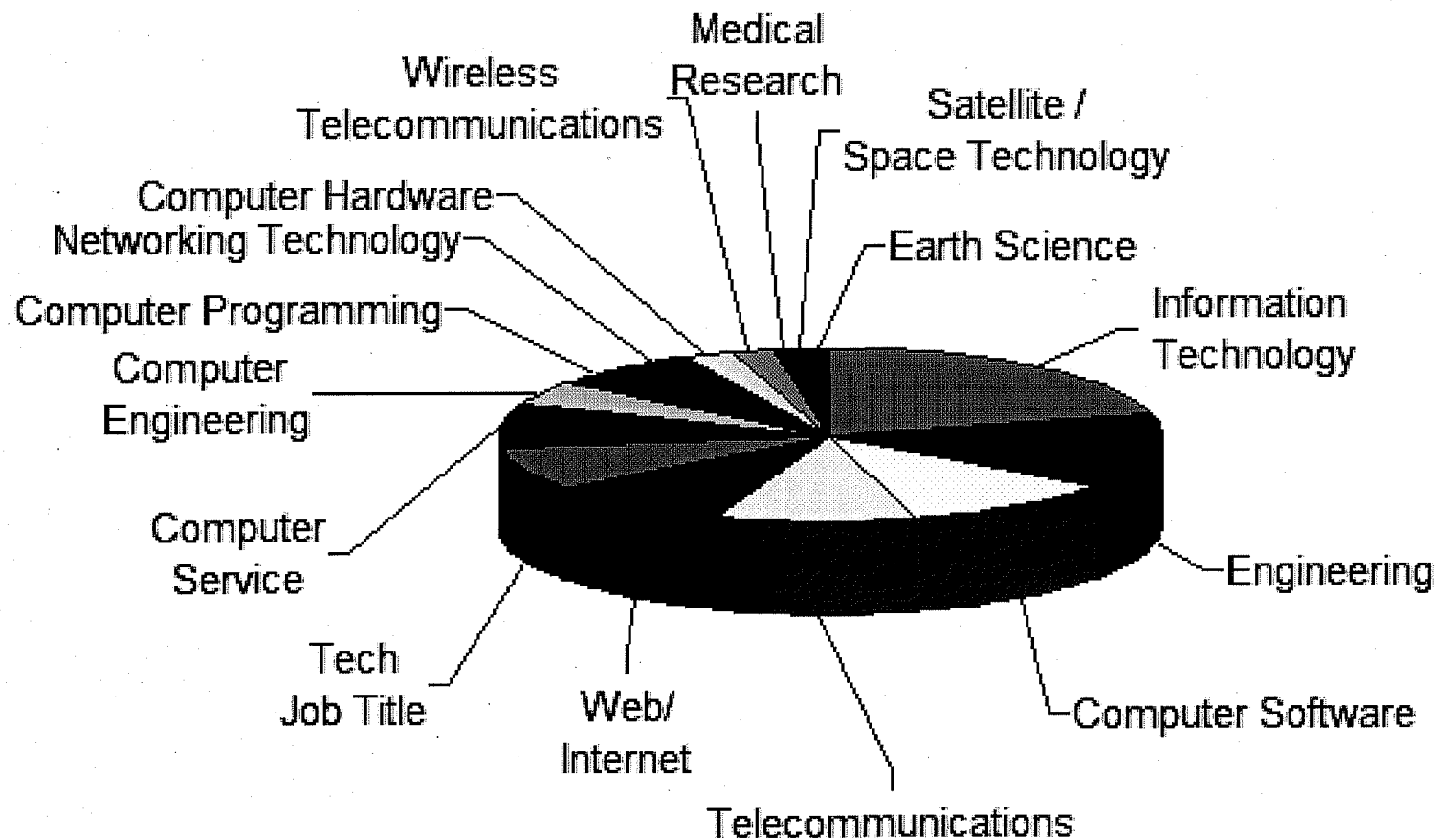


Global Pau Hana Data

- Annual Holiday Tech Job Fair, sponsored by DBEDT/High Tech Development Corp has attracted 300+ attendees, 25+ companies in recent years.
- With no funding and minimal promotion, GPH has grown about 20% per year. This year we will be actively growing the membership.

Global Pau Hana

Science and Engineering responses by industry



Global Pau Hana

Science and Engineering projected skill pool

