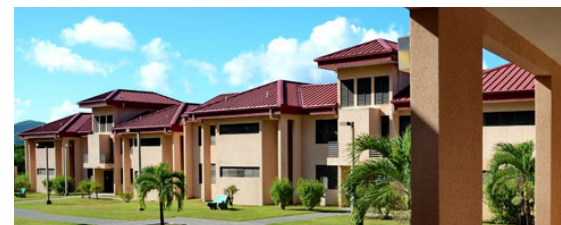


# RESTORING GROWTH, EXPANDING OPPORTUNITY

## The Economic Impact of the University of the Virgin Islands



June 2014



This report was prepared by Appleseed, a New York City-based economic development consulting firm that works with government, corporations and nonprofit institutions to promote economic growth and opportunity.



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# EXECUTIVE SUMMARY

For fifty years, the University of the Virgin Islands (UVI), a public land-grant university, has been providing opportunities for higher education and lifelong learning to residents of the U.S. Virgin Islands and other Eastern Caribbean states; conducting research aimed at finding solutions to some of the Territory's and the region's most pressing problems; developing and delivering a wide range of community services; enriching the region's cultural life; and supporting the growth of the Territory's and the region's economy.

As the University begins its second half-century, the U.S. Virgin Islands is facing an array of challenges to its economic future, including the lingering effects of a worldwide financial crisis and a severe recession, the loss of its largest manufacturing enterprise, and the demands of an increasingly interconnected and highly competitive global economy. As the Territory's only comprehensive degree-granting institution, its leading research center, and one of its largest knowledge-based enterprises, UVI is especially well-positioned to help the U.S. Virgin Islands and the region respond to these challenges, and return to a path of sustained (and sustainable) economic growth.

This report – prepared by Appleseed, a New York City-based economic development consulting firm – assesses UVI's current impact on the economy of the U.S. Virgin Islands, highlights a number of recent initiatives through which the University is seeking to strengthen the Territory's and the region's economy, and briefly discusses several reasons why the University's impact is likely to be even greater in the future than it is today.

## UVI as an enterprise

- In the fall of 2013, UVI employed 790 people (excluding students), of whom more than 61 percent worked full-time. Wages and salaries paid by the University in fiscal year 2013 totaled nearly \$30.2 million.
- In addition to the people it employs directly, the University supported 72 full-time-equivalent (FTE) jobs in the U.S. Virgin Islands in fiscal year 2013 through its purchases of goods and services from local suppliers and contractors and its investments in University construction projects.
- Taking into account direct University spending on payroll, purchasing and construction, as well as the indirect and induced (or “multiplier”) effects of such spending, we estimate that in fiscal year 2013 UVI spending directly and indirectly accounted for:
  - 930 jobs in the U.S. Virgin Islands;
  - More than \$35.0 million in wages and salaries; and
  - More than \$65.2 million in Territory-wide economic output.
- In addition to the impact of spending by the University itself, off-campus spending by students and by visitors to UVI in fiscal year 2013 directly and indirectly accounted for:
  - 152 FTE jobs in the U.S. Virgin Islands;
  - \$3.97 million in wages and salaries; and
  - \$18.29 million in Territory-wide economic output.
- When combined, we estimate that in fiscal year 2013 spending by UVI on payroll, purchasing and construction and off-campus spending by UVI students and visitors directly and indirectly accounted for:

- 1,083 FTE jobs in the U.S. Virgin Islands;
- Nearly \$39.0 million in wages and salaries; and
- More than \$83.5 million in Territory-wide economic output.

## Developing the Territory’s human capital

- Economists in the U.S. and elsewhere have consistently found that human capital – the totality of knowledge, skills and experience accumulated over time by a community’s (or a country’s) workforce – is a major factor in determining whether communities and nations flourish or fall behind economically.
- As the Territory’s only accredited, comprehensive degree-granting institution, UVI plays a central role in the development of the U.S. Virgin Islands’ human capital. In the fall of 2012, 2,477 students were enrolled in for-credit programs at UVI, of whom about 94 percent were U.S. Virgin Islands residents.
- Most students who earn degrees at UVI continue to live and work in the U.S. Virgin Islands. As of the summer of 2013, more than 77 percent of those who have earned degrees at UVI are residents of the Territory. About 13.3 percent live on the U.S. mainland and 9.4 percent live elsewhere – many of them on other islands in the Eastern Caribbean.
- Based on 2010 U.S. Census data, we estimate that UVI graduates account for about 27 percent of all U.S. Virgin Islands residents who have at least an associate’s degree.
- UVI is also the Territory’s leading provider of non-credit continuing education. In the fall of 2012, 1,496 students were enrolled in non-credit continuing education courses.

- Based on U.S. Census data on the earnings of Virgin Islands residents by level of educational attainment, we estimate that in 2013 the knowledge and skills acquired at the University by UVI graduates added about \$48 million to the aggregate earnings of U.S. Virgin Islands residents.
- In May 2014, the University's Board of Trustees authorized UVI to move ahead with the development of a School of Medicine. As the only medical school in the English-speaking Caribbean accredited by the Liaison Committee for Medical Education – the organization that accredits medical schools in the U.S. and Canada – the new school would have a competitive advantage in attracting talented faculty members and students. It would enhance the quality of health care in the U.S. Virgin Islands and elsewhere in the region, and would strengthen UVI's role as an exporter of higher education services.

## Research, entrepreneurship and economic development

- University research has been a growth enterprise at UVI. Between 2002 and 2012, research spending at UVI grew by 84 percent, to \$25.7 million. About 88 percent of UVI's research spending in fiscal year 2012 was financed by federal funds.
- UVI's research programs include major strengths in the following areas:
  - Marine and environmental science;
  - Green technology;
  - Agriculture and aquaponics;
  - Water resources;
  - Social sciences; and
  - Health disparities.
- During the past few years UVI has devel-

oped several new programs aimed at preparing a new generation of entrepreneurs in the U.S. Virgin Islands, including:

- A minor in entrepreneurship and an entrepreneurship certificate program; and
- An entrepreneurship competition in which more than 100 UVI students participated in the 2012-2013 academic year, with the three winning students sharing \$60,000 in cash prizes.
- During fiscal year 2013, UVI's Small Business Development Center conducted 211 training sessions for the Territory's small business owners and aspiring entrepreneurs, in which a total of 1,769 people participated; and provided nearly 2,400 hours of one-on-one counseling to 322 individual clients.
- UVI's 10-acre Research and Technology Park, located on the University's St. Croix campus, was created "to position the USVI as a near-shore, world-class provider of e-commerce and information technology infrastructure solutions for knowledge-based, e-commerce and digital content companies." The Park's first 18,000-square-foot building was completed in 2013, at a cost of \$13 million, and now houses both the Research and Technology Park Corporation and the UVI's College of Science and Mathematics.

While the Research and Technology Park Corporation's client companies can be located anywhere in the Territory, the Park provides a hub for the Corporation's program and a place where companies can connect to the University. Participating companies receive significant tax benefits, in exchange for which they commit to doing business in the Virgin Islands and providing scholarship funds to UVI. As of the end of 2013, 18 companies were participating in the program; together they employed about 220 people in the U.S. Virgin Islands.



- In collaboration with New Generation Power, a Chicago-based solar power company, UVI is developing new photovoltaic energy plants on its St. Thomas and St. Croix campuses, with a combined capacity of approximately three megawatts. These new facilities will significantly reduce the University's power costs, and enable UVI to expand its work on the development of alternative energy sources for the Territory and for other states in the Eastern Caribbean.

In 2014 the University announced that Veri-own Energy, a subsidiary of New Generation Power, would also develop microgrids on its St. Thomas and St. Croix campuses, providing enhanced storage and distribution capacity for the new solar systems. The microgrid project is being financed with a \$3 million grant from the U.S. Department of Agriculture.

## Outreach and community engagement

- Strong economies are built on a foundation of strong communities. As a public land grant institution, UVI plays a unique role in the ongoing development of the economy of the U.S. Virgin Islands through its mission of outreach and service to its community.
- UVI Cooperative Extension Service (CES) provides outreach and service to Virgin Islands communities through a wide range of programs, including:
  - Training and technical assistance provided to farmers and other agriculture and natural resource-based businesses in the Territory;
  - Demonstrations on home gardening techniques;
  - 4H – the Territory's largest youth devel-

- opment program; and
- Education and training in areas such as basic computer skills and nutrition.
- UVI offers an array of programs aimed at strengthening elementary and secondary education in the U.S. Virgin Islands, and expanding educational opportunities for the Territory's younger residents. They include, for example:
  - The 4H Summer Academy, a six week enrichment program for children ages 5 through 14;
  - Science and environmental education camps at the Virgin Islands Environmental Resource Station on St. John;
  - University Bound, a weekend and summer program for high school students with academic potential who may nevertheless need help preparing for college-level work; and
  - UVI's Male Initiative – Brothers with a Cause, a program that seeks to attract more male students to the University, and at the same time to provide them with the tools they will need to succeed at UVI.
- UVI is also an important cultural resource for the U.S. Virgin Islands. Notable examples include:
  - The Reichhold Center for the Arts, the Territory's leading performing arts center;
  - *The Caribbean Writer*, a leading regional literary journal, published and edited at UVI; and
  - The Virgin Islands Caribbean Cultural Center, established in 2012 to help preserve and promote awareness of the Territory's and the region's rich culture and traditions.

- Other community programs and initiatives at UVI include:
  - The Virgin Islands University Center for Excellence in Developmental Disabilities, which offers a range of programs and services aimed at improving the lives of the Territory’s disabled residents; and
  - UVI’s Anti-Violence and Peace Initiative, which brings together resources from across the University to work with the community to reduce the level of violence in the Virgin Islands.
- During the past few years, UVI has been developing memoranda of understanding (MOU’s) with the governments of other Eastern Caribbean states. These agreements will make it easier for residents of the Eastern Caribbean to take advantage of the educational opportunities UVI offers, while at the same time generating new revenues for the University and strengthening its position as an exporter of higher education services.
- Much of the research conducted at UVI can benefit not only the U.S. Virgin Islands but its neighbors as well. Examples include:
  - Research on threats to coral reefs – one of the region’s most important natural resources;
  - Applied research on the development of more sustainable, lower-cost energy sources;
  - Research on health disparities affecting the region’s minority populations;
  - Research on socioeconomic conditions and trends in the Eastern Caribbean.

## Contributing to the development of the Eastern Caribbean

- While most UVI alumni live in the U.S. Virgin Islands, hundreds of University graduates are residents of other Eastern Caribbean states, including leaders in government, commerce, education, health care, religion and culture across the region.



- UVI also contributes to the cultural vitality of the Eastern Caribbean – for example, through the work of the Virgin Islands Caribbean Cultural Center (described above).
- Community initiatives such as the development of strategies for preventing gang violence and expanding educational and employment opportunities for young men can also benefit the Eastern Caribbean region.

## UVI and the future of the Virgin Islands economy

- During the next five to ten years, UVI's contribution to the ongoing development of the economy of the U.S. Virgin Islands is likely to be even greater than it is today. This is so for several reasons:

- Over time, the cumulative impact of recently-established academic programs – such as the bachelor's degree in tourism and hotel management – will increase, as more and more graduates of these programs enter the Territory's workforce. Other new programs being planned will have a similar impact.

The most important of these new programs is likely to be the UVI School of Medicine, which is expected to enroll its first class of future physicians during the 2016-2017 academic year. As noted above, the establishment of the new school will help the U.S. Virgin Islands and the region address a projected shortage of physicians, and enhance the overall quality of health services available to residents. The new School of Medicine will also help to attract talented students and faculty to UVI, and expand the scope of the University's research enterprise.

- The creation of new, innovative businesses is essential to the process of reversing the decline of the Territory's economy, and providing new sources of growth. During the next five to ten years, UVI's increased emphasis on entrepreneurship should over time increase the rate at which new business ventures are created in the U.S. Virgin Islands, and improve their chances for success.
- Through projects such as the Caribbean Green Technology Center and its collaboration with New Generation Power on the development of solar energy facilities, the University can be a catalyst for the continuing development of the Territory's economy.
- UVI's focus (spelled out in the University's strategic plan) on increasing enrollment of students from the U.S. mainland and from other Eastern Caribbean states will increase the role of higher education as a significant export industry for the U.S. Virgin Islands – one that derives a growing share of its revenues from sources outside the Territory.

For these and other reasons, UVI is likely to play a key role in helping the U.S. Virgin Islands overcome the economic setbacks it has suffered during the past few years, building a strong foundation for future economic growth and expanding economic opportunity for the Territory's and the region's residents.



# INTRODUCTION

The University of the Virgin Islands, a public university first established in 1962 to serve the people of the U.S. Virgin Islands, contributes in several ways to the Territory's economy. It is a major enterprise in its own right; the Territory's only comprehensive degree-granting institution and its leading center of research and development; a source of innovation and a supporter of entrepreneurial development; a provider of a wide range of services to Virgin Islands communities.

In order to fully understand and effectively communicate its contributions to the Territory's economy, the University asked Appleseed – a New York City-based consulting firm with extensive experience working with U.S. universities – to assess UVI's economic impact. This report presents the results of Appleseed's assessment.

## Organization of the report

Part One of the report provides an overview of the University and of the economy of the U.S. Virgin Islands. Part Two analyzes the University's impact as a major territorial enterprise – a leading employer, a buyer of goods and services and sponsor of construction projects.

Part Three assesses UVI's role in the development of the Territory's human capital, and Part Four examines the role of University research in the Virgin Islands economy. Part Five highlights the University's support for entrepreneurship, innovation and economic development.

Part Six of the report describes the multiple ways in which UVI is helping to strengthen communities and improve the quality of life in the Virgin Islands and Part Seven highlights the University's contributions to the development of the Eastern Caribbean region. Part Eight concludes the report with a brief discussion of several reasons why the University's impact on the Territory's economy could be even greater during the next five to ten years than it is today.

## Acknowledgments

This report could not have been completed without the active assistance and support of many people at UVI. We would especially like to thank Dr. David Hall, President of the University, and Dr. Haldane Davies, Special Assistant to the President.

Special thanks to the following faculty and staff for making time for interviews and phone conversations, and for your help in compiling UVI data and information used in our analysis: Jessica Taylor, Nereida Washington, Tina Koopmans, Shirley Lake-King, Dionne Jackson, Nanyamka Farrelly, Frank Mills, Nicole Gibbs, Sandra Romano, Richard G. Cleaver, Doris C. Battiste, Camille McKayle, Asha DeGannes, Wendy Coram, Ilene Garner, Denise Humphrey, Paul Jobsis, Wayne Archibald, Gloria Callwood, Lilymae Durante, Yegin Habtes, Aubrey D. Washington, Simon Jones Hendrickson, Cheryl Franklin, Patricia Towal, Robert Godfrey, Kwame Garcia, Leonor D. Dottin, Steen Stoval, Debra Thompson, Tamara Lang, David Zumwalt, Linda Thomas, Yvonne D. Lawrence, Laurence Blake and Peggy Fahie.



# PART ONE: THE UNIVERSITY OF THE VIRGIN ISLANDS - OVERVIEW AND CONTEXT

The University of the Virgin Islands (UVI) is a public land-grant university “dedicated to the success of its students and committed to enhancing the lives of the people of the U.S. Virgin Islands and the wider Caribbean through excellent teaching, innovative research and responsive community service.” The University was chartered by the Legislature of the U.S. Virgin Islands in 1962 as the College of the Virgin Islands. The college opened its doors with several associate’s degree programs in 1963, and began offering bachelor’s degrees in the liberal arts and education in 1967.

In 1972 the U.S. Congress enacted legislation giving the College land-grant status, which enabled it to establish an Agricultural Experiment Station and a Cooperative Extension Service. Over the next several years, the College added master’s degree programs in education, business administration, and public administration. Reflecting the growth and diversification of its educational, research and community service programs, the

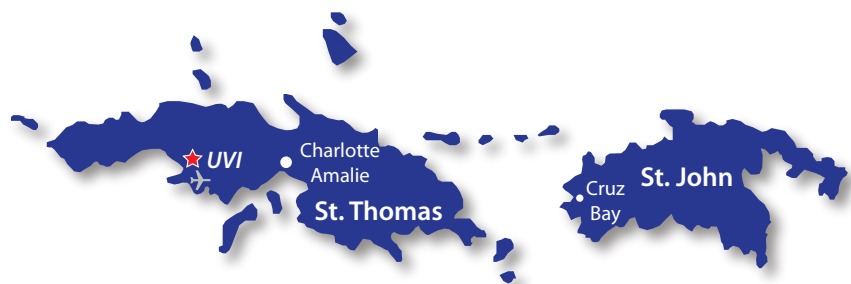
College was renamed the University of the Virgin Islands in 1986.

Today UVI is a co-educational public university with nearly 2,500 students on campuses on St. Thomas and St. Croix, and an Academic Center on St. John. The University grants associate’s, bachelor’s and master’s degrees in 48 program areas through five colleges and schools:

- College of Liberal Arts and Social Sciences
- College of Science and Mathematics
- School of Business
- School of Education
- School of Nursing

The University also has a growing research enterprise, with notable strengths in agriculture and aquaculture, marine sciences, water resources and Eastern Caribbean studies. As the Territory’s leading educational institution, UVI also operates a wide range of outreach and community service programs.

**Figure 1: Map of UVI’s campus locations in the U.S. Virgin Islands**

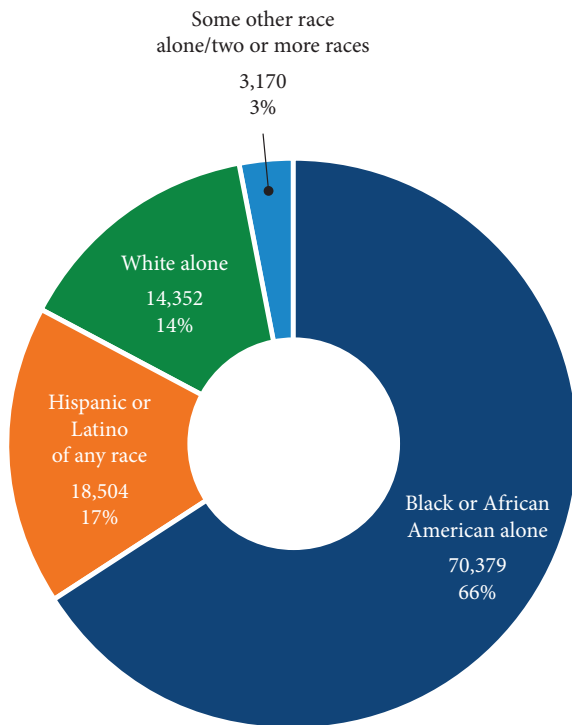


## The University in context: economic and social conditions

As a public, land-grant institution, UVI's primary mission is to serve the educational, research, community service and community development needs of the U.S. Virgin Islands (USVI), a U.S. Territory with a population of more than 106,400. The U.S. Census Bureau reports that in 2010 (as shown in Figure 2), 66.1 percent of the Territory's population was non-Hispanic black, 13.5 percent was non-Hispanic white and 17.4 percent was Hispanic.



**Figure 2: Composition of the U.S. Virgin Islands' population by ethnicity**



Source: U.S. Census Bureau, 2010 Census, U.S. Virgin Islands



At \$37,254, median household income in the USVI in 2009 was about 35 percent lower than that for the U.S., but higher than that for the Caribbean region generally. About 22 percent of all USVI residents in 2009 lived in households with incomes below the federally-defined poverty level.<sup>1</sup>

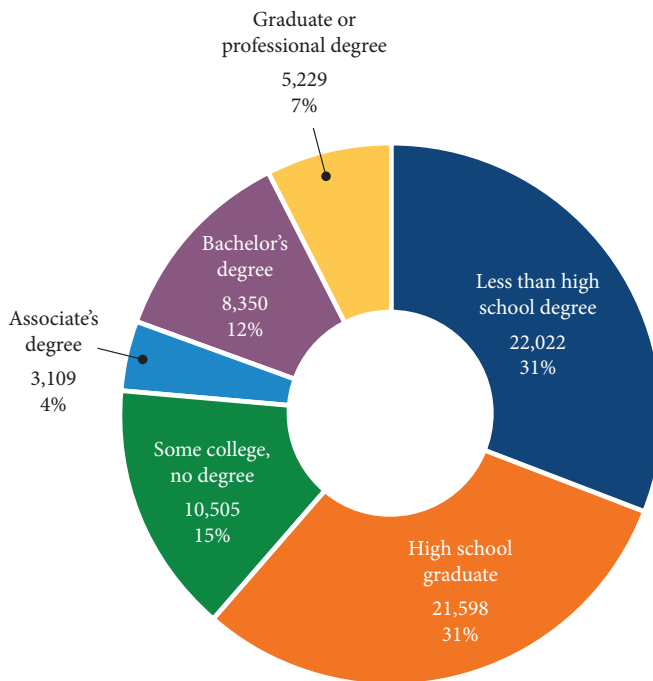
The Territory's comparatively low income levels in part reflect its relatively low levels of educational attainment. As of 2010 (as Figure 3 shows), more than 31 percent of all USVI residents age 25 and older had not completed high school, while fewer than 24 percent had earned at least an associate's degree.

The economy of the U.S. Virgin Islands is built on a few key industries. As of November 2013 (as Figure 4 shows), the leisure and hospitality sector accounted for more than 25 percent of all private-sector wage and salary employment in the Territory, followed by retail trade (22 percent), professional and business services (12 percent), education and health services (9 percent) and finance (8 percent).

Other notable activities include construction, rum production – the Territory's largest manufacturing industry, and one of its leading exports – and farming, including production of both crops (fruits and vegetables) and livestock, primarily for local consumption.

1. In 2009 the poverty threshold for a family of four as defined by the U.S. government was \$21,954.

**Figure 3: Educational attainment for U.S. Virgin Islands residents age 25 years and over, 2010**



Source: U.S. Census Bureau, 2010 Census, U.S. Virgin Islands

In addition to the sectors identified in Figure 4, government – primarily the government of the Territory – is the largest employer in the U.S. Virgin Islands, with more than 10,900 employees as of November 2013.<sup>2</sup>

Since 2008, the economy of the U.S. Virgin Islands has suffered a series of reversals from which the Territory has yet to recover. The worldwide financial crisis that erupted in the fall of 2008 and the severe recession that followed led to a sharp drop in spending on travel and tour-

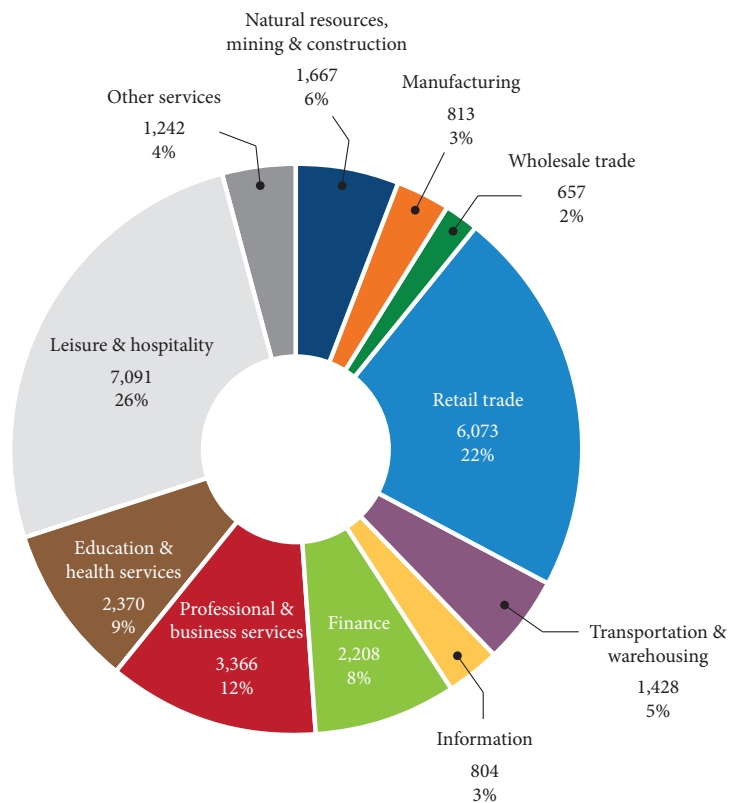
2. U.S. Virgin Islands Department of Labor, Current Employment Statistics.

ism. Visitor spending in the U.S. Virgin Islands fell from \$1.51 billion in 2007 to \$1.01 billion in 2010 – a decline of nearly one-third.<sup>3</sup>

A few years later, just as the U.S. economy was beginning to recover, HOVENSA (a joint venture of Hess Oil and PDVSA of Venezuela, and the Territory’s largest private enterprise) announced that it was closing its St. Croix refinery. The HOVENSA shutdown cost the Territory 1,200 highly-paid refinery jobs and (by at least one estimate) 960 jobs with other businesses that served HOVENSA and its employees.

3. USVI Office of the Governor, Bureau of Economic Research, “U.S. Virgin Islands Annual Tourism Indicators”.

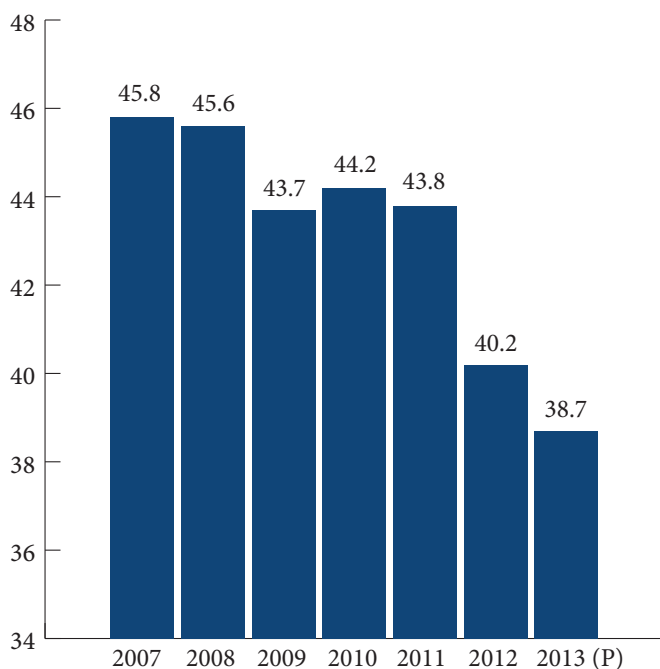
**Figure 4: Total private payroll employment in the U.S. Virgin Islands by sector, November 2013**



Source: U.S. Virgin Islands Department of Labor, Current Employment Statistics

As a result of these and other trends, the Territory's gross domestic product fell from \$4.9 billion in 2007 to an estimated \$3.3 billion in 2013. Total wage and salary employment fell from an annual average of approximately 45,800 in 2007 to about 40,200 in 2012 – a decline of 12.2 percent. This downward trend continued during 2013, with average annual employment (based on preliminary estimates) falling to 38,700. From 2007 through 2013, wage and salary employment (as shown in Figure 5) has declined by about 15.5 percent.

**Figure 5: Average annual payroll employment in the U.S. Virgin Islands, 2007-2013 (preliminary) (employment in thousands)**



Source: Bureau of Labor Statistics, U.S. Department of Labor, Current Employment Statistics

### Implications for the University

The economic contractions of the past five years have severely strained the finances of the government of the U.S. Virgin Islands; and this in turn has required tight constraints on University spending. At the same time, economic setbacks have made it more difficult for some USVI residents to afford tuition – even as others are looking to UVI to help them acquire the skills that can help them find new jobs or build new careers. The net result has been a decline of 9 percent in total enrollment since 2010 – which further constrains the University's finances.

But even as UVI seeks to cope with these short-term financial constraints, it is important to recognize that the University can be a major contributor to the recovery of the Territory's economy in the near term – and to the longer-term process of building a more prosperous future for the Territory and its residents. It can do this by:

- Enabling USVI residents to acquire the knowledge and skills they need both to raise their own incomes and living standards, and to strengthen the Territory's ability to thrive in an increasingly competitive world economy;
- Conducting research that will help the Territory address some of its most significant challenges, and collaborating with others in the process of translating the results of that research into new products, businesses and jobs; and
- Expanding the University's role as an export business, bringing tuition, research funding and other revenues into the USVI from outside the Territory.

## The broader regional context: the Eastern Caribbean

The context in which UVI operates includes not only the U.S. Virgin Islands but the broader Eastern Caribbean region as well. Geographically (as shown below in Figure 6), the region includes a chain of islands stretching from the U.S. and British Virgin Islands in the north to Grenada in the south. The islands include several independent states, as well as overseas territories of the United Kingdom, France and the Netherlands.

Nine of these islands (or groups of islands) are members of the Organization of Eastern Caribbean States (OECS): Anguilla, Antigua and Barbuda, the British Virgin Islands, Dominica, Grenada, Montserrat, St. Kitts & Nevis, St. Lucia

and St. Vincent and the Grenadines. Eight OECS members (all except the British Virgin Islands) are also members of the Eastern Caribbean Currency Union (ECCU) with a common currency – the Eastern Caribbean dollar, managed by the Eastern Caribbean Central Bank. Together, the nine members of the OECS have a population of approximately 640,000 and a gross domestic product of approximately \$16 billion.

These island states have much in common with the U.S. Virgin Islands – demographically, culturally, economically and environmentally. Their closeness is reflected, for example, in the fact that in 2010 (according to the U.S. Census Bureau) about 21 percent of all USVI residents had migrated to the Territory from one of the nine other Eastern Caribbean states.

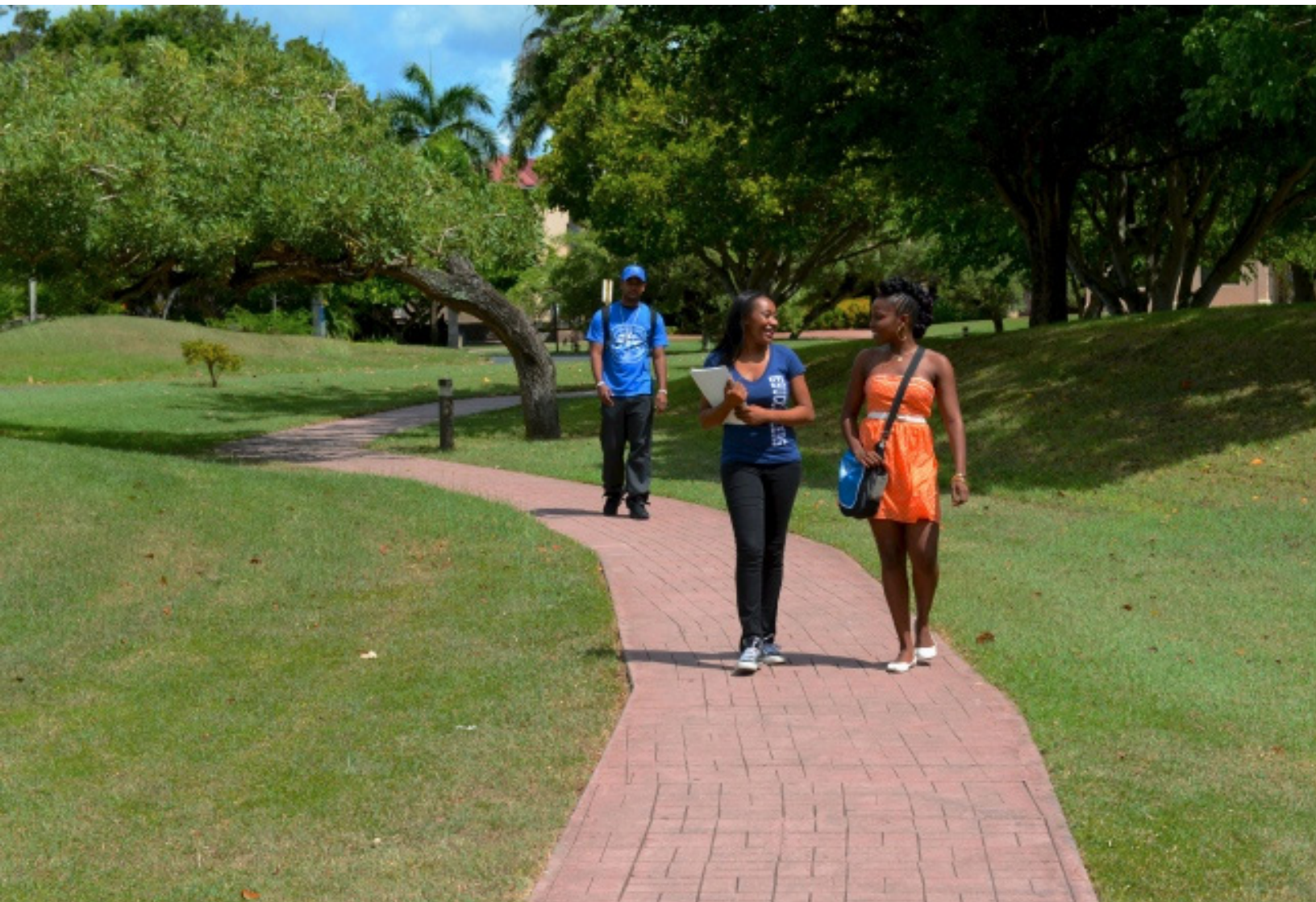
Figure 6: Map of the Eastern Caribbean



The U.S. Virgin Islands and the other Eastern Caribbean States face many of the same challenges:

- A severe recession followed by a slow recovery;
- The need to diversify their economies, to find new sources of growth and to prepare their people to live and work in a global economy; and
- The need to develop lower-cost and more sustainable sources of energy, to overcome threats to the marine environment and to address long-term challenges associated with climate change.

As one of the region's leading educational institutions, the University of the Virgin Islands is especially well-positioned to assist all of the people and communities of the Eastern Caribbean in meeting these challenges.





## PART TWO: UVI AS AN ENTERPRISE

The University of the Virgin Islands is a significant enterprise in its own right – a leading employer of USVI residents, a buyer of goods and services from local businesses, and a sponsor of construction projects. UVI also contributes to the Territory’s economy through off-campus spending by students and by visitors to the University.

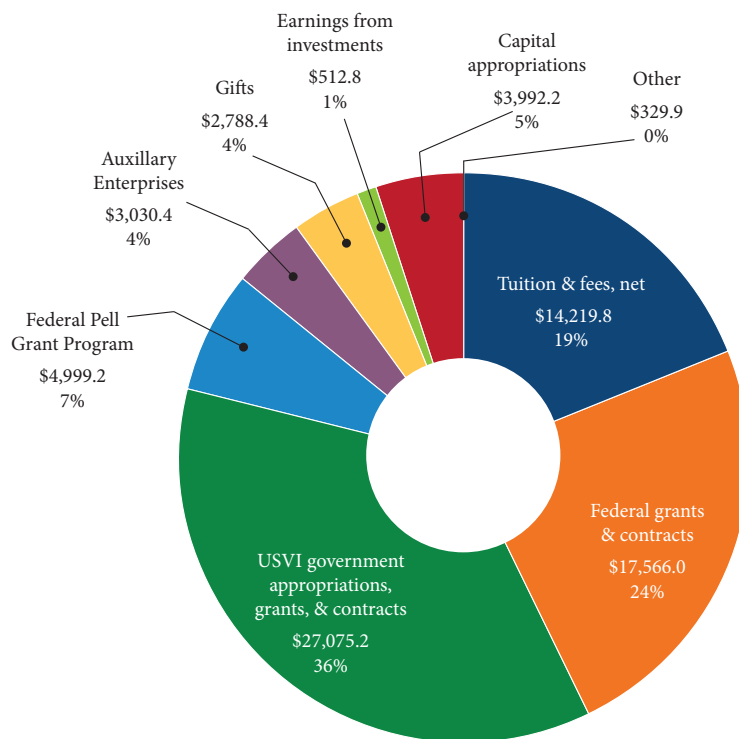
This part of the report examines the impact of UVI as a major local and regional enterprise.

## UVI's revenues

In fiscal year 2013, UVI's revenues totaled more than \$74.5 million. As Figure 7 shows:

- U.S. Virgin Islands and local government appropriations, grants, and contracts (nearly \$27.1 million) accounted for 36.3 percent of all revenues;
- Federal grants and contracts (nearly \$17.6 million) accounted for 23.6 percent;
- Student tuition and fees (\$14.2 million) accounted for 19.1 percent;
- Federal Pell Grant Program (nearly \$5.0 million) accounted for 6.7 percent;
- Capital appropriations (nearly \$4.0 million) accounted for 5.4 percent; and
- Auxilliary enterprises (\$3.0 million), gifts (nearly \$2.8 million), earnings from investment and miscellaneous other revenues accounted for 8.9 percent.

**Figure 7: UVI revenues by source, FY 2013 (in \$ 000's)**



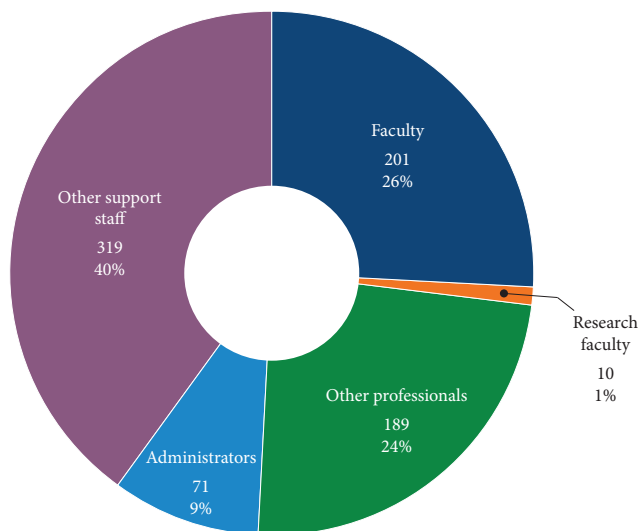
## UVI as an employer

In the fall of 2013, UVI employed 790 people (excluding students) at its two campuses, of whom 62.9 percent worked on the University's campus on St. Thomas and 37.1 percent at the University's campus on St. Croix. Of this total, 61.0 percent were full-time employees and 39.0 percent worked part-time.

In addition to the University's regular full- and part-time employees, UVI employs students in a variety of part-time jobs across campus.

UVI provides job opportunities in a wide variety of occupations. As Figure 8 shows, in the fall of 2013, faculty positions accounted for nearly 25.4 percent of all non-student employment; other professionals for 23.9 percent; administrators for 9.0 percent; other support staff for 40.4 percent; and research faculty for 1.2 percent.

**Figure 8: Composition of employment at UVI by occupation, fall 2013**



During fiscal year 2013, salaries and wages paid to all UVI employees (including student employees) totaled nearly \$30.2 million. Salaries of the University's full-time employees averaged \$40,641.

In addition, UVI provides a wide range of employee benefits, including:

- Health insurance;
- Life and disability insurance;
- Retirement plans;
- Housing; and
- Vacation accruals.

The University also provides opportunities for its employees and their dependents to develop their professional skills through in-house training programs and tuition remission and tuition reimbursement benefits. During 2012-2013, 245 employees and their dependents participated in these programs – an average benefit of about \$958 per employee or dependent in professional development programs.

## The impact of purchasing and construction

In addition to the people it employs directly, UVI contributes to the Territory's economy through its purchases of goods and services and its sponsorship of construction projects.

### *Purchases of goods and services*

In fiscal year 2013, UVI spent more than \$30.1 million on purchases of goods and services, including utilities. Of this total, nearly \$12.9 million was paid to businesses located in the U.S. Virgin Islands. Leading categories of goods and services purchased from companies located in



the U.S. Virgin Islands include utilities, employee health insurance, professional services, telecommunications services and office supplies.

Using IMPLAN<sup>4</sup>, we estimate that in fiscal year 2013, purchases of goods and services from local businesses directly supported 34 full-time-equivalent (FTE) jobs in the U.S. Virgin Islands.

### Construction

From fiscal year 2008 through fiscal year 2013, UVI invested a cumulative total of \$37.8 million in the construction of new and renovation of existing buildings. In fiscal year 2013, construction and renovation spending totaled nearly \$4.7 million, of which nearly \$3.3 million (70 percent) was paid to contractors in St. Thomas, and nearly \$1.4 million (approximately 30 percent) was paid to contractors in St. Croix.

Using IMPLAN, we estimate that in fiscal year 2013, spending on construction by UVI directly supported 21 FTE jobs with contractors in the U.S. Virgin Islands.

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4. The IMPLAN input-output modeling system is an economic modeling tool commonly used in economic impact analysis. For this study, Appleseed used a version of this model that is tailored to the economy of the U.S. Virgin Islands.

## Indirect and induced effects

UVI's impact on the Territory's economy goes beyond the direct impact of its spending on payroll, purchasing and construction. It also includes "indirect and induced" or "multiplier" effects. U.S. Virgin Islands companies from which the University buys goods and services use some of the money paid to them by UVI to buy goods and services from other local businesses, and those businesses in turn buy some of what they need from still other local companies. Similarly, UVI employees (and the employees of UVI's local suppliers) spend part of their take-home pay within the Territory – for housing, utilities, food, child care, entertainment and other routine household needs.

Using the IMPLAN input-output modeling system – a tool of economic analysis commonly used in economic impact studies – we can measure these indirect and induced effects of UVI spending. We estimate that through these effects, UVI spending on payroll, purchasing and construction in fiscal year 2013 indirectly accounted for the following:

- 85 FTE jobs in the U.S. Virgin Islands;
- More than \$2.5 million in wages and salaries; and
- Nearly \$18.1 million in Territory-wide economic output.



## Direct, indirect and induced effects of UVI spending

Taking into account the number of people employed directly by UVI and their wages and salaries, the direct impact of UVI's spending on purchasing and construction from local vendors and contractors, and the indirect and induced impact of UVI's spending on payroll, purchasing and construction, we estimate that in fiscal year 2013 (as shown in Table 1), UVI spending directly and indirectly accounted for the following:

- 930 FTE jobs in the U.S. Virgin Islands;
- More than \$35.0 million in wages and salaries; and
- More than \$65.2 million in Territory-wide economic output.<sup>5</sup>

5. Rather than applying a single multiplier to all University spending, the IMPLAN model used by Appleseed incorporates a variety of industry-specific multipliers that are used to estimate the indirect and induced effects of UVI's spending on goods and services (such as utilities, professional services, insurance, office supplies, printing, janitorial services, etc.) and construction, as well as the effects of household spending by UVI employees. Based on the direct and

## Contributing to local government revenues

Despite its tax-exempt status, UVI's operations generate tax revenues for local government in several ways. For example, in fiscal year 2013, UVI:

- Withheld \$2.7 million in U.S. Virgin Islands income taxes from the wages and salaries paid to University employees; and
- Paid \$25,244 in unemployment insurance taxes.

## The impact of student and visitor spending

In addition to the impact of UVI's spending on payroll, purchasing and construction, off-campus spending by UVI students and by visitors to the University also has an impact on the local economy.

total spending impacts cited in Table 1 (\$47.176 million and \$65.246 million respectively), we can estimate that the overall multiplier for UVI's in-Territory spending on payroll, purchasing and construction would be 1.383.

**Table 1: Direct, indirect and induced impact of UVI spending in the USVI, FY 2013**  
(jobs in FTE, wages and output in \$ 000's)

	Jobs	Wages	Output
<b>Direct spending impact</b>			
Payroll	790	\$30,158.8	\$30,158.8
Purchasing/construction	55	\$2,323.0	\$17,016.7
<i>Subtotal, direct impact</i>	845	\$32,481.7	\$47,175.5
<b>Indirect and induced effects</b>			
Employee spending	68	\$1,951.4	\$14,086.9
Contractor and vendor spending	17	\$579.3	\$3,983.2
<i>Subtotal, indirect/induced impact</i>	85	\$2,530.7	\$18,070.1
<b>TOTAL IMPACT</b>	<b>930</b>	<b>\$35,012.4</b>	<b>\$65,245.6</b>

### The impact of student spending

In the fall of 2012, UVI enrolled 1,445 full-time students, including 1,241 full-time bachelor's degree students, 152 full-time associate's degree students and 52 full-time master's degree students. Of this total, approximately 7.0 percent of all full-time students came to UVI from outside the U.S. Virgin Islands.

The impact of student spending is determined in part by whether students live on-campus, or elsewhere in the Territory. During the 2012-2013 academic year, approximately 37.1 percent of all full-time undergraduate students (20 percent of all undergraduates) lived on-campus in UVI housing.<sup>6</sup> No graduate or associate's degree students lived in on-campus UVI housing.

6. Our analysis of the impact of student spending includes only estimated spending by full-time students on the assumption that part-time students would still be living and spending money in the U.S. Virgin Islands whether or not they enrolled at UVI.

Using the average cost of living per student provided by the University (as shown in Table 2), we estimate that in fiscal year 2013, off-campus spending – for housing, food, transportation, entertainment and other needs – by full-time students coming to UVI from outside of the Territory totaled nearly \$1.2 million. We estimate off-campus spending by full-time students who are residents of the Territory totaled \$11.6 million.

Using IMPLAN, we estimate that in fiscal year 2013, off-campus student spending directly and indirectly accounted for:

- 121 FTE jobs in the U.S. Virgin Islands;
- \$3.1 million in wages and salaries; and
- \$14.8 million in Territory-wide economic output.

**Table 2: Average annual UVI student off-campus expenditures, FY 2013**

	Undergraduate			Graduate
	<i>Living on-campus</i>	<i>Living with parents</i>	<i>Living off-campus</i>	<i>Living off-campus</i>
<b>USVI Resident</b>				
Room and board	-	\$5,778	\$11,374	\$11,374
Transportation	\$990	\$1,282	\$1,282	\$1,282
Personal expenses	\$2,040	\$2,040	\$2,040	\$3,286
<b>TOTAL, RESIDENT STUDENT SPENDING</b>	<b>\$3,030</b>	<b>\$9,100</b>	<b>\$14,696</b>	<b>\$15,942</b>
<b>Non-USVI Resident</b>				
Room and board	-	-	\$11,374	<b>\$11,374</b>
Transportation	\$2,580	-	\$2,870	\$2,870
Personal expenses	\$2,040	-	\$2,040	\$3,286
<b>TOTAL, NON-RESIDENT STUDENT SPENDING</b>	<b>\$4,620</b>	-	<b>\$16,284</b>	<b>\$17,530</b>

### The impact of visitor spending

Based on data obtained from the University and other sources, we estimated that 1,600 people from outside of the Territory came to the U.S. Virgin Islands to visit and attend UVI-sponsored events during the 2012-2013 academic year, including the annual Paradise Jam, one of the nation's leading early-season college basketball tournaments.

Based on visitor expenditure data from the U.S. Virgin Islands Bureau of Economic Research, we estimate that local spending by visitors to the University totaled almost \$2.9 million during the 2012-2013 academic year.

Using IMPLAN, we estimate that off-campus spending by visitors to UVI directly and indirectly accounted for:

- 31 FTE jobs in the U.S. Virgin Islands;
- \$836,612 in wages and salaries; and
- Nearly \$3.5 million in Territory-wide economic output.

### Adding it all up: the impact of UVI, student and visitor spending

When the impact of UVI's spending on payroll, purchasing and construction is combined with the impact of off-campus student and visitor spending, we estimate that in fiscal year 2013, UVI directly and indirectly accounted for:

- 1,083 FTE jobs in the U.S. Virgin Islands;
- Nearly \$39.0 million in wages and salaries; and
- More than \$83.5 million in Territory-wide economic output.

Based on 2012 Quarterly Census of Employment and Wages data, we estimate that the 1,083 FTE jobs generated by UVI, student and visitor spending accounted for approximately 2.7 percent of total payroll employment in the Territory in 2012; and that the \$39.0 million in wages and salaries generated by UVI, student and visitor spending accounted for 2.5 percent of total wages and salaries paid in the Territory in 2012. These total impacts are summarized below in Table 3.

**Table 3: UVI's total economic impact in the U.S. Virgin Islands, FY 2013**  
(jobs in FTE, wages and output in \$000's)

	Jobs	Wages	Output
<b>Impact of UVI spending</b>			
Direct	845	\$32,481.7	\$47,175.5
Indirect/induced	85	\$2,530.7	\$18,070.1
<i>Subtotal, UVI spending impact</i>	930	\$35,012.4	\$65,245.6
<b>Impact of student spending</b>			
Direct	107	\$2,658.3	\$11,721.9
Indirect/induced	15	\$476.1	\$3,102.9
<i>Subtotal, student spending impact</i>	121	\$3,134.4	\$14,824.8
<b>Impact of visitor spending</b>			
Direct	27	\$714.3	\$2,651.2
Indirect/induced	4	\$122.3	\$814.1
<i>Subtotal, visitor spending impact</i>	31	\$836.6	\$3,465.3
<b>TOTAL IMPACT</b>	<b>1,083</b>	<b>\$38,983.4</b>	<b>\$83,535.6</b>



## PART THREE: DEVELOPING HUMAN CAPITAL

During the past twenty-five years, research on the sources of economic growth has confirmed the central role of human capital – the totality of knowledge, skills and experience accumulated over time by a community’s (or a country’s) workforce – in determining whether communities and nations flourish or fall behind economically. Human capital can be especially critical in determining how quickly and how successfully communities can adapt to changes in the broader economic environment.

One of the most important measures of human capital is the level of education achieved by a region’s residents. The impact of higher education on individual earnings is widely recognized. The average earnings of workers with college degrees are significantly higher than the average earnings of those with only a high school education (or less). As shown in Figure 9, in 2009 the median earnings of USVI residents who had bachelor’s degrees was more than \$17,000 greater (68 percent higher) than the median income of those who had only a high school diploma, and the median income of those with graduate or

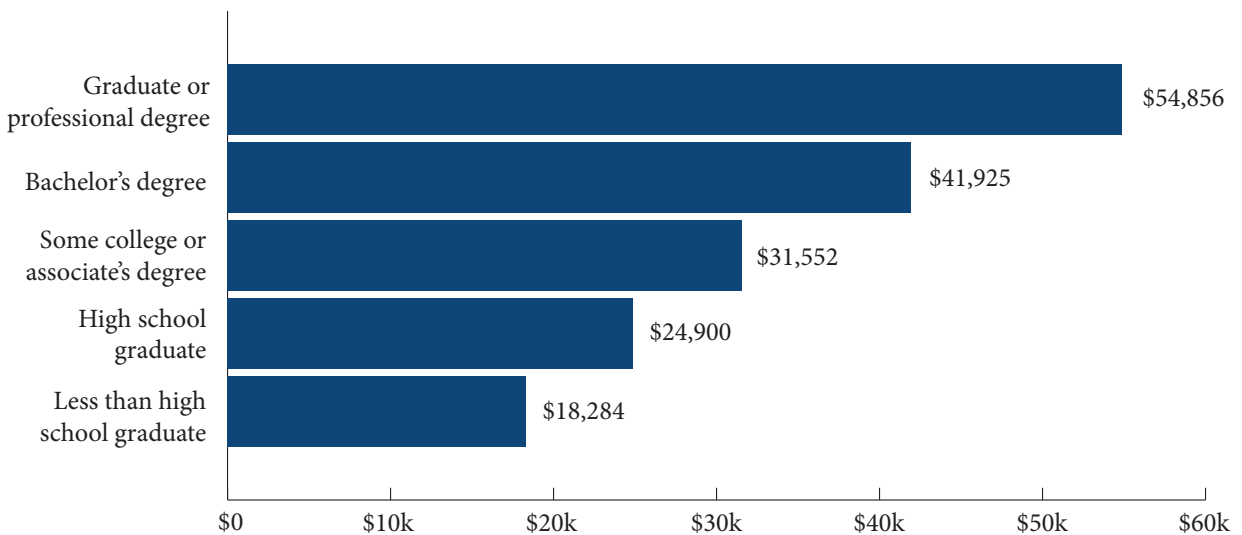
professional degrees was nearly \$30,000 greater (120 percent higher) than the median income of those who had only a high school diploma.

The economic benefits of higher education are not limited to those who earn degrees. A study published by the Milken Institute in 2013 found that in U.S. metropolitan areas, increasing employed workers’ average years of schooling by one year increased regional GDP per capital by 10.5 percent and increased average real wages by 8.4 percent.

Higher education was found to have an even greater impact than education generally: Adding one year of schooling to the educational attainment of workers who already had a high school diploma increased average GDP per capita by 17.4 percent and average real wages by 17.8 percent.<sup>7</sup>

7. Ross de Vol et al, A Matter of Degrees: The Effect of Educational Attainment on Regional Economic Prosperity, The Milken Institute, February 2013, p.1.

**Figure 9: Median earnings (in 2009 dollars) by educational attainment for U.S. Virgin Islands residents 25 years and older, 2009**



Source: U.S. Census Bureau, 2010 Census, U.S. Virgin Islands

Even non-college-educated workers benefit from this effect. Enrico Moretti has shown that a one percentage point increase in the percentage of workers with college degrees is associated with a 1.6 percent increase in the earnings of workers who only have high school diplomas.<sup>8</sup>

This part of the report examines the University of the Virgin Islands’ role in the development of the Territory’s human capital.

## Enrollment at UVI

In the fall of 2012, 2,477 students were enrolled in for-credit programs at UVI. As Table 4 shows, 1,800 of these students (nearly 73 percent of total enrollment) were undergraduates working toward bachelor’s degrees, while 342 (13.8 percent) were working toward associate’s degrees and 184 (7.4 percent) toward master’s degrees.

8. Enrico Moretti, “Social Returns to Human Capital,” NBER Reporter: Research Summary, spring 2005; and Moretti, *The New Geography of Jobs* (Houghton Mifflin Harcourt, 2012) p. 100.

As Table 4 also shows, the School of Business had the largest undergraduate enrollment at UVI, followed closely by the College of Liberal Arts and Social Sciences and the College of Science and Mathematics. Together these three schools accounted for more than 75 percent of total undergraduate enrollment. At the graduate level, nearly half of all master’s degree students were enrolled in the School of Education.

About 69 percent of all bachelor’s degree students in the fall of 2012 attended UVI full-time. The majority of those working toward associate’s and master’s degrees, in contrast, were enrolled part-time.

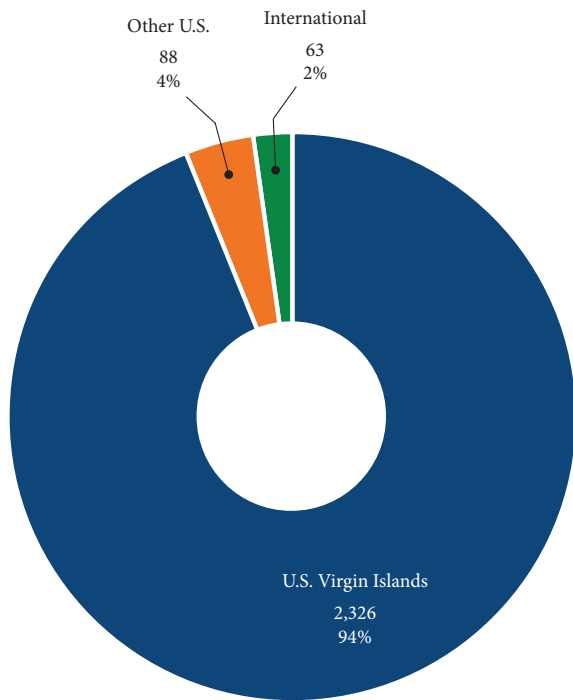


**Table 4: For-credit enrollment at UVI, by school and type of degree, fall 2012**

	Associate’s	Bachelor’s	Master’s	Non-degree	Total
School of Business	96	492	28	1	617
School of Education	32	183	90	1	306
College of Liberal Arts and Social Sciences	32	545	32	6	615
School of Nursing	131	183	0	0	314
College of Science and Mathematics	51	397	34	0	482
Undeclared	0	0	0	143	143
<b>TOTAL ENROLLMENT</b>	<b>342</b>	<b>1,800</b>	<b>184</b>	<b>151</b>	<b>2,477</b>

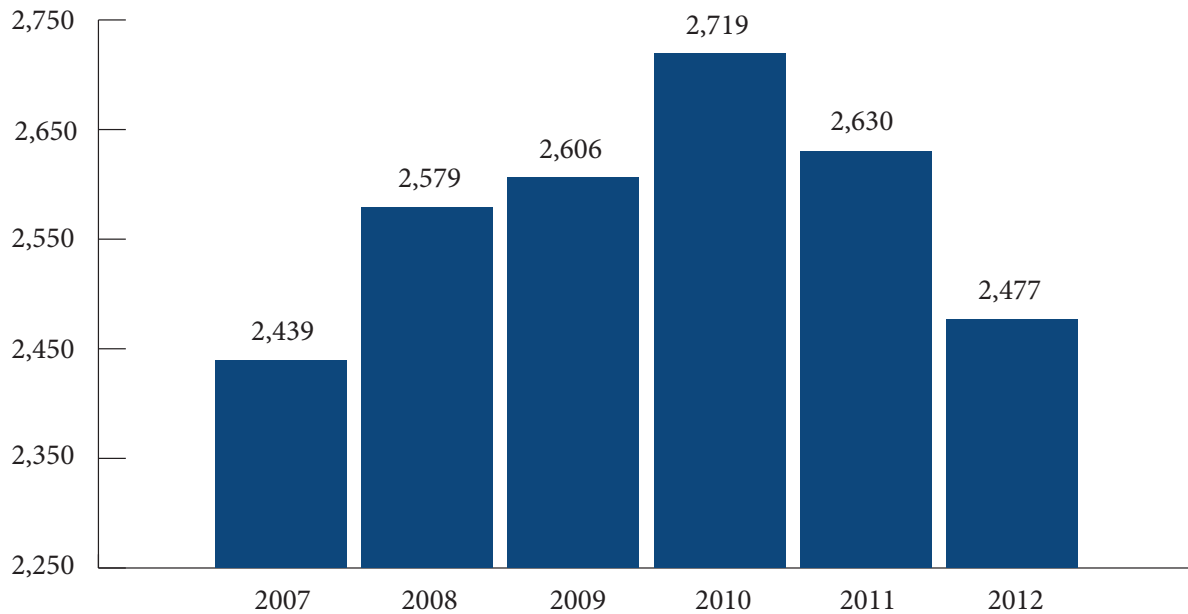
The great majority of UVI students – about 94 percent – are U.S. Virgin Islands residents. About 3.6 percent came from elsewhere in the U.S., and 2.5 percent from other nations – primarily from other island states in the Eastern Caribbean.

**Figure 10: UVI total for-credit enrollment by student's place of residence, fall 2012**





**Figure 11: UVI total for-credit enrollment, fall 2007 – fall 2012**

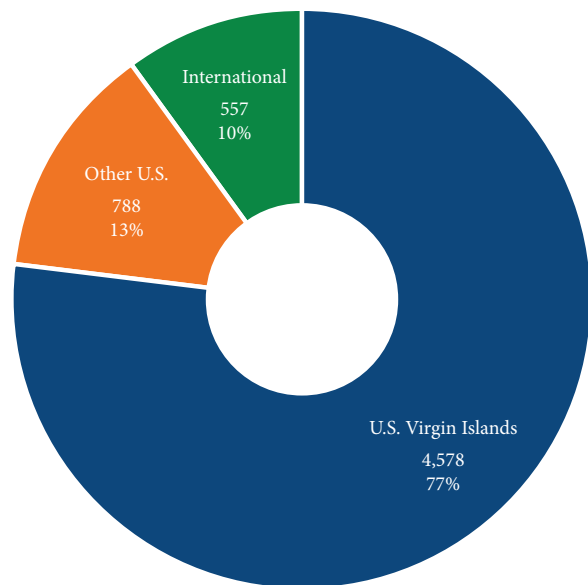


Enrollment at UVI has fluctuated in recent years. As Figure 11 shows, for-credit enrollment grew by 11.5 percent between the fall of 2007 and the fall of 2010 to a high of 2,719, but then declined in 2011 and 2012. The most recent decline in enrollment appears to be driven primarily by the deterioration of economic conditions in the U.S. Virgin Islands.

### Where UVI alumni live

Most students who earn degrees at UVI continue to live and work in the U.S. Virgin Islands. As Figure 12 shows, as of the summer of 2013 more than 77 percent of those who have earned degrees at UVI are residents of the Territory, while 13.3 percent live on the U.S. mainland and 9.4 percent live elsewhere – many of them on other islands in the Eastern Caribbean.

**Figure 12: UVI alumni by place of residence, summer 2013**



Based on 2010 U.S. Census data, we estimate that UVI alumni account for more than 27 percent of all USVI residents age 25 and over who have at least an associate's degree.

## Helping students prepare for careers in key industries

UVI offers programs at both undergraduate and graduate levels that prepare students for a wide range of careers – including careers in some of the Territory's leading industries, as well as industries with significant potential for growth. Several notable examples are described below.

- Since 2011, the School of Business has offered a ***B.A. in hotel and tourism management***. The program, which includes courses in areas such as hotel operations, resort management, cruise line operations, customer service and tourism development and requires two 300-hour hospitality internships, prepares students for a wide range of management and professional positions in the Territory's leading industry. The School also offers an A.A. degree in hotel and restaurant management.
- The UVI School of Nursing has offered a ***B.S. in Nursing*** since 1986. The program combines academic work with clinical training in a variety of settings, and prepares students to take U.S. national licensing exams. The School also offers an "RN to BS" program for registered nurses who have not yet earned bachelor's degrees.
- The College of Science and Mathematics offers a ***B.S. degree in computer science***, preparing students both for graduate studies in this field and for jobs in the Territory's growing information technology industry.
- The School of Business offers a ***B.A. in business administration*** – the University's most popular undergraduate major. With concentrations in accounting, finance, management, marketing and computer applications, the program prepares students for a wide range of career opportunities in business, government and other organizations.
- UVI's College of Liberal Arts and Social Sciences offers ***A.A.S., B.A. and B.S. degrees in criminal justice***. All three programs prepare students for positions in law enforcement, the court system and security, and enable those already working in the field to advance in their careers. The B.A. degree includes a focus on law and criminal justice policies and procedures, while the B.S. degree provides a greater emphasis on forensic sciences.
- The School of Education offers a ***B.A. in elementary education*** that prepares students to teach in elementary schools in the Virgin Islands and elsewhere. During their final semester, students working toward this degree work as student teachers in local schools on St. Thomas or St. Croix. The program is also designed to prepare students for graduate work in education.
- Undergraduate students have the opportunity to pursue either their ***B.A. or B.S. in marine biology*** at UVI's St. Thomas campus. During the program, students learn how to apply a strong background in the biological and physical sciences to the study of marine environments through core classes in general biology, chemistry and physics in addition to specialized courses in marine biology. Students also have the opportunity to participate in for-credit research and field studies, preparing them for graduate-level work upon graduation.

- Undergraduates enrolled in the College of Science and Mathematics' dual degree **3-2 Engineering Program** earn both a B.S. in applied mathematics from UVI and a B.S. in engineering from one of three partner institutions – Columbia University, the University of Florida, and the University of South Carolina – in five years. Students spend their first three years at UVI fulfilling their degree requirements in applied math and taking other courses in science and computer science related to their field of interest in engineering, followed by two years at the affiliated university.
- In collaboration with HOVENSA, UVI in 2002 created an **associate of applied science degree in process technology**. The program prepares students for technical jobs not only in oil refining, but in other energy industries, wastewater treatment, pharmaceutical manufacturing and other industries. Although enrollment in the program has declined since HOVENSA shut down, it continues to provide a gateway to highly-paid technical jobs.
- Since 2007, the College of Science and Mathematics has offered a **master's degree in marine and environmental science**. Students in the two-year program can choose between two tracks – one focusing on planning, conducting and evaluating marine and environmental research, and the other on the management of natural resources, with a particular focus on natural resource management in the Caribbean. The program attracts talented students not just from the Virgin Islands but from elsewhere in the U.S. and other countries, and produces graduates who are well prepared to deal with issues in the marine environment that are critical to the future of the Territory and the entire Caribbean region.
- The UVI School of Education offers a **master's degree in education**, with concentrations in teaching, educational leadership, and counseling and guidance.

Learning opportunities for UVI students are not limited to the degree programs the University offers. Through partnerships with Brookhaven National Laboratory in New York and the National Renewable Energy Lab in Colorado, for example, a select number of students each year can spend the summer working and studying at these laboratories, developing a better understanding of the energy challenges that confront the Virgin Islands, the nation and the world.

The quality of the education UVI provides is evident from its accreditations. The University is accredited by the Commission on Higher Education of the Middle States Association of Colleges and Schools. The School of Nursing is accredited by the Accreditation Commission on Education in Nursing (ACEN). The School of Business has been accredited by the Association of Collegiate Business Schools and Programs (ACBSP); and the School of Education is awaiting accreditation by the National Council for Accreditation of Teacher education (NCATE).

## The impact of a UVI education on workers' earnings

By helping to develop the Territory's human capital, UVI is helping to build a foundation for economic recovery in the U.S. Virgin Islands, and for raising the incomes of the Territory's residents. Between 2000 and 2010, the number of U.S. Virgin Islands residents age 25 and older with some college experience or an associate's degree increased by 16.4 percent – the number with bachelor's degrees by 22.1 percent – and the number with graduate degrees by 26.1 percent.

As shown in Figure 9, the median earnings of Virgin Islands residents with associate's, bachelor's or graduate degrees are significantly higher than the median earnings of those with only a high school education. Using the Census Bureau data shown in Figure 13, and assuming that in the absence of UVI only half of its graduates would have had the opportunity to earn college degrees, we estimate that in 2013, the education provided at UVI increased the aggregate earnings of University graduates living in the U.S. Virgin Islands by approximately \$37.93 million.

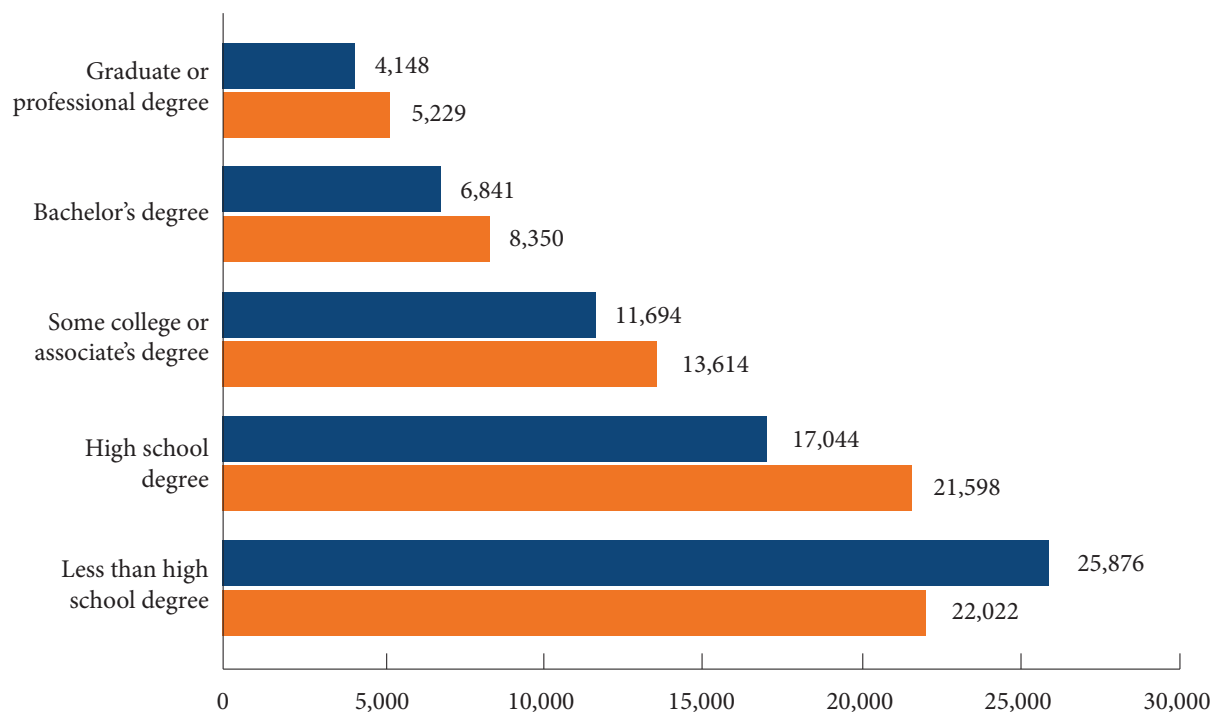
As noted previously, research by Enrico Moretti and others has found that increasing the percentage of a region's workers who have college degrees also has positive spillover effects on the earnings of those who have only a high school education. Based on Moretti's findings, and assuming that UVI's graduates account for half of the increase between 2000 and 2010 in the per-

centage of the Territory's residents with college degrees, we estimate that in 2013, the earnings of U.S. Virgin Islands workers with only a high school education were in the aggregate \$10.06 million higher than they would have been in UVI's absence.

Taking into account the direct effect of a UVI education on graduates' earnings and its indirect effect on the earnings of others, we estimate that in 2013, the knowledge and skills acquired at the University by UVI graduates added nearly \$48 million to aggregate earnings in the U.S. Virgin Islands.

From a different perspective, the value of the education that UVI provides can also be seen in the support that the University receives from its alumni. In 2012-2013, more than 51.7 percent of the University's alumni participated in its annual fund-raising campaign, making UVI the first

**Figure 13: Growth in the level of educational attainment for U.S. Virgin Islands residents 25 years and older, 2000 & 2010**



institution among America’s historically black colleges and universities (HBCU’s) to have at least 50 percent of its alumni participate.

## Continuing education at UVI

In addition to the wide range of degree programs it offers, UVI provides opportunities for residents of the U.S. Virgin Islands to advance their careers through its continuing education programs.

### *Developing the skills of the Territory’s workforce*

Founded in 2002 “to meet the workforce and professional development training needs critical to the economic prosperity of the Virgin Islands and surrounding Caribbean islands,” the University’s ***Community Engagement and Lifelong Learning (CELL) Center*** offers a wide variety of in-class and online workforce and professional development and personal enrichment programs. Students can pursue continuing education credits (CEUs) and certificates in areas such as healthcare, project management, green/renewable energy, entrepreneurship, accounting, and social media.

CELL also provides customized training programs for local businesses and government agencies. During 2012-2013, CELL provided training for nine local businesses and government agencies, with a total of 199 employees participating in these programs. CELL also provides professional and consulting services to local businesses. The Center serves as a certified test center for organizations such as the Transportation Security Administration (TSA), U.S. Customs and Border Protection (CBP), and the National Association of Legal Assistants, and also provides GED and GRE testing.

In the fall of 2012 (as shown in Table 5), 1,496 students were enrolled in CELL’s non-credit continuing education programs – a number equivalent to about 60 percent of total full- and part-time for-credit enrollment at UVI.

UVI’s CELL program offerings and flexible course schedules expand the educational and professional development opportunities available to working professionals and non-traditional students in the U.S. Virgin Islands and the broader Eastern Caribbean region. Through these programs, UVI helps residents of the Territory and the region advance their careers; and by enhancing the skills of the Territory’s workforce, contributes to the growth of its economy.

**Table 5: Non-credit enrollment in UVI’s CELL programs, fall 2012**

CELL Program	Total enrolled
Workforce development programs	187
Professional development programs	263
Personal enrichment programs	66
Online programs	291
Corporate training programs (number of attendees)	490
Testing center (number served)	199
<b>TOTAL</b>	<b>1,496</b>

### *Strengthening leadership skills*

In addition to developing the skills of the Territory's general workforce, UVI is committed to enhancing the leadership skills of people in executive and management positions in government agencies, non-profit organizations and businesses. The University's *Institute for Leadership and Organizational Effectiveness (ILOE)* seeks to achieve this objective through a variety of conferences, seminars, workshops and training programs.

Launched in 2013 in partnership with the U.S. Virgin Islands Division of Personnel, ILOE's *Certified Public Manager Program* provides management professionals in federal, state, and local government and non-profit organizations with the skills needed to be successful and effective

leaders in public service. During the course of the 10-12 month program, participants develop their administrative, analytical, management and communication skills through a variety of courses, professional training seminars, case studies and simulations in areas such as ethics and conflicts of interest, managerial and supervisory skills, personal growth and development and strategic planning and decision making.

The CPM Program's first cohort consisted of managers from the U.S. Virgin Islands. UVI is aiming however, to expand the program to serve public-sector managers from other Eastern Caribbean states as well.





## Establishing a New School of Medicine

Ensuring the availability of (and access to) high-quality health care is an important goal both for the U.S. Virgin Islands and for other nations in the Caribbean. UVI is already helping to achieve this goal through the work of its School of Nursing, and in the spring of 2014 took a major step into the future when the University's Board of Trustees unanimously approved a recommendation from President David Hall to begin the process of developing a School of Medicine.

Just a week later, President Hall announced that Dr. Chirinjeev Kathuria, Chairman of New Generation Power (a Chicago-based company that is partnering with UVI on a solar power project, described in Part Four of the report) had made a gift of \$30 million to support development of the new school. The government of the U.S. Virgin Islands will also participate in financing the new facilities the school will require.

The Territory's two hospitals – Schneider Regional Medical Center on St. Thomas and Juan F. Luis Hospital on St. Croix – will collaborate with UVI in this new venture. The school will focus on innovative methods for teaching and learning the science and practice of medicine, and providing students with practical experience in caring for patients in community settings.

The Boston University School of Medicine has been working with UVI for several years to explore the feasibility of establishing a medical school in the U.S. Virgin Islands. The BU School of Medicine has also been sending several of its own fourth-year students to St. Thomas each spring for clinical training at Schneider Regional Medical Center on St. Thomas. Over the next several years, BU will continue to work with UVI on development of the new school.

UVI will seek accreditation from the Liaison Committee on Medical Education, which accredits medical schools in the U.S. and Canada. As the only institution in the English-speaking Caribbean accredited by LCME, UVI would set a new standard for medical education in the region, and would have a significant competitive advantage in attracting talented faculty members and students.

Establishment of the new medical school will enhance the quality of health care, and help address a projected shortage of physicians, both in the U.S. Virgin Islands and throughout the region. It will create an opportunity to add both laboratory and clinical research in the biomedical sciences to UVI's existing research enterprise, thus increasing the flow of both federal and private research funds to the Virgin Islands. And it will further strengthen the Territory's economy by significantly expanding UVI's role as an exporter of higher education services, both to the U.S. mainland and to other Caribbean communities.



## PART FOUR: THE ROLE OF UNIVERSITY RESEARCH



Research conducted by faculty, staff and students at the University of the Virgin Islands contributes in several ways to the vitality of the Territory's economy.

- Each year, UVI attracts millions of dollars in external (primarily federal) research funding to the Virgin Islands, most of which is spent within the Territory.
- Research conducted at UVI expands the boundaries of knowledge in areas that in the years ahead could prove to be continuing sources of innovation and economic growth.
- Participation in research projects enhances the education of UVI students and their abil-

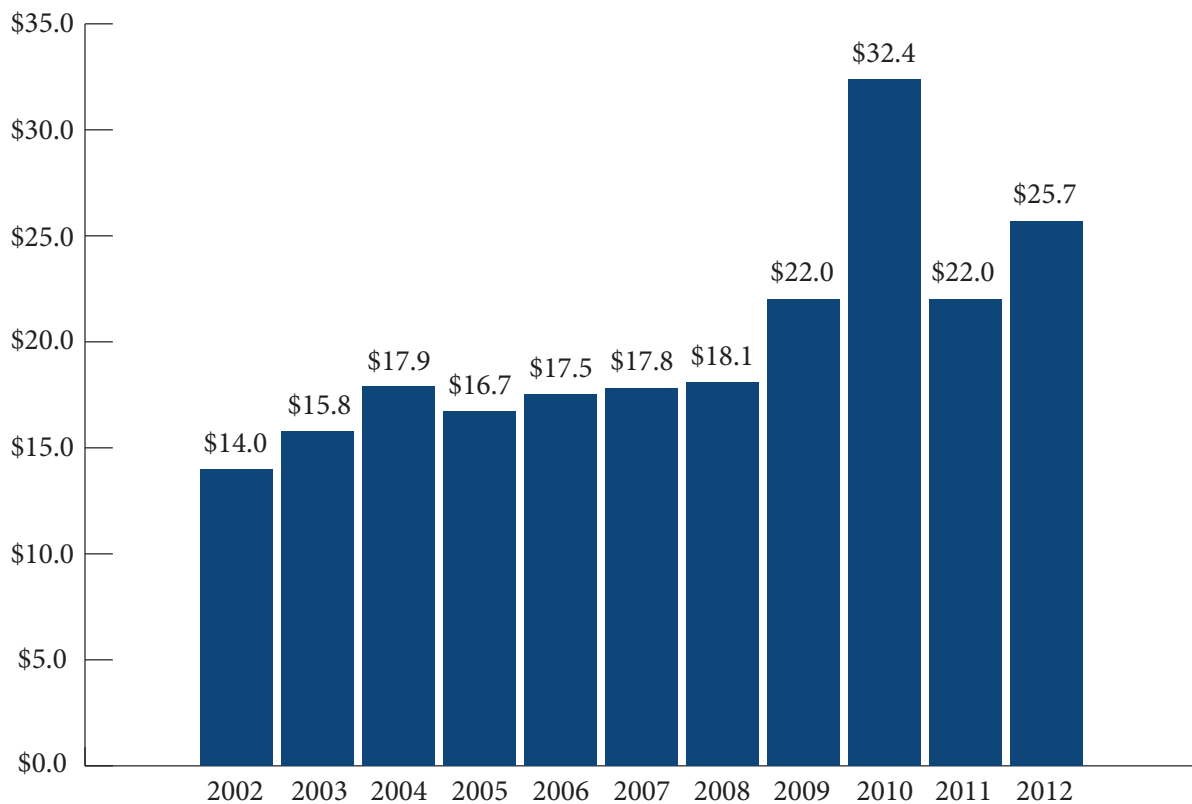
ity to participate in the continued development of the Territory's economy.

### A growing research enterprise

Between fiscal year 2002 and fiscal year 2012 (as shown in Figure 14), research spending at the University of the Virgin Islands grew by 84.0 percent, to \$25.7 million.<sup>9</sup>

9. National Science Foundation, National Center for Science and Engineering Statistics, Survey of Research and Development Expenditures at Universities and Colleges/Higher Education Research and Development Survey.

**Figure 14: UVI research spending, FY 2002 – FY 2012 (in \$ millions)**



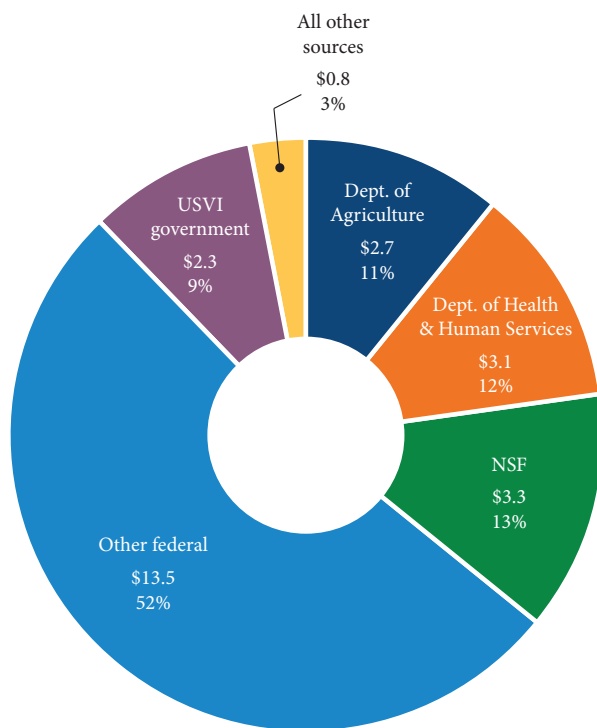
Source: NSF Survey of Research and Development Expenditures at Universities and Colleges/Higher Education Research and Development Survey

As Figure 15 shows, the federal government is UVI's leading source of research funding, accounting for almost 88 percent (\$22.6 million) of total research expenditures in fiscal year 2012.<sup>10</sup>

10. National Science Foundation, National Center for Science and Engineering Statistics, *Survey of Research and Development Expenditures at Universities and Colleges/Higher Education Research and Development Survey*.

Among federal agencies, the National Science Foundation was the largest source of funding for UVI research, followed by the Department of Health and Human Services (including the National Institute of Health) and the Department of Agriculture. In addition to federal funding, USVI government funding accounted for more than \$2.3 million in research spending in fiscal year 2012 (9.1 percent of total UVI research spending).

**Figure 15: UVI research spending by source of funding, FY 2012 (in \$ millions)**



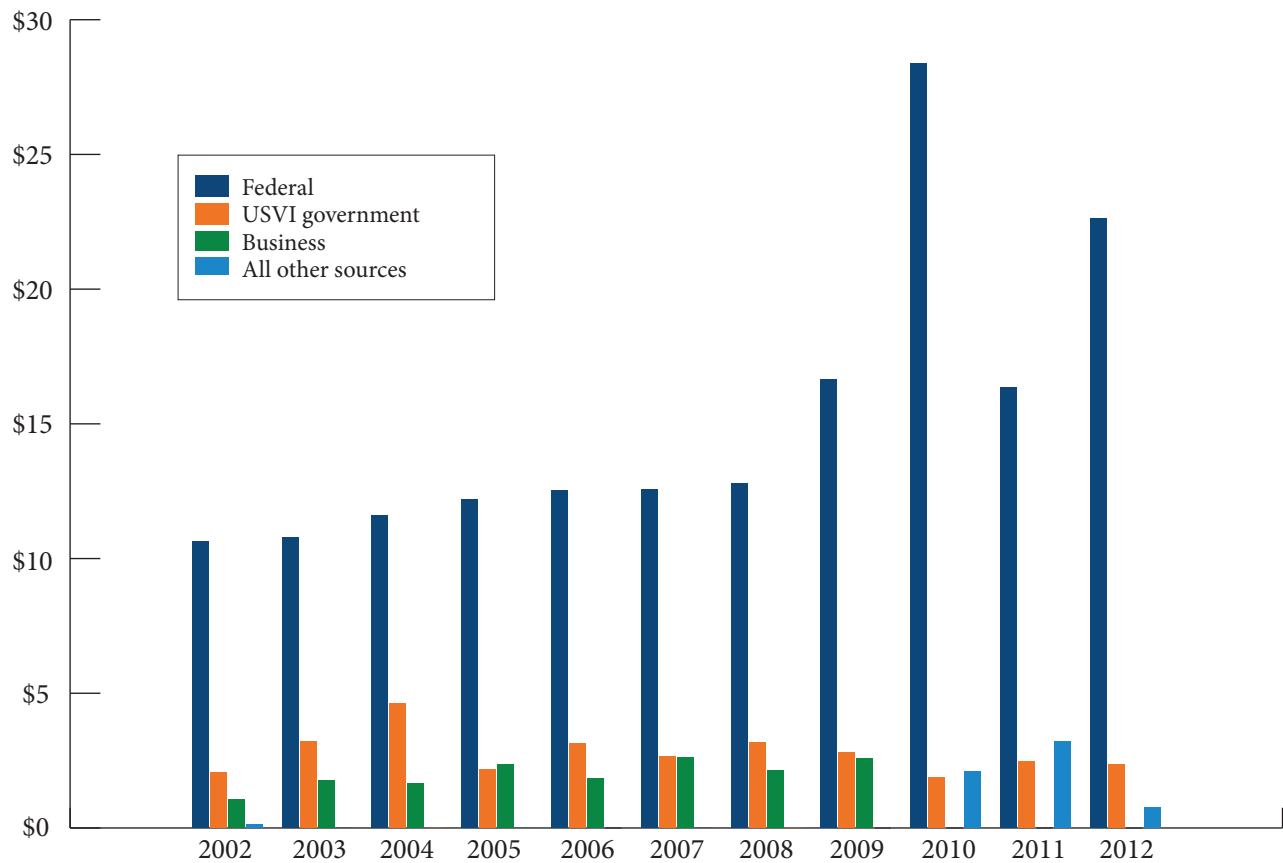
Source: NSF Survey of Research and Development Expenditures at Universities and Colleges/Higher Education Research and Development Survey



As Figure 16 shows, increases in federally-funded research have been the primary driver of increased research spending at UVI. Between fiscal years 2002 and 2012, federally-funded research

spending at UVI more than doubled, with an average annual growth rate of 7.8 percent over 10 years.

**Figure 16: Trend in UVI research spending by source of funding, FY 2002 – FY 2012 (in \$ millions)**



Source: NSF Survey of Research and Development Expenditures at Universities and Colleges/Higher Education Research and Development Survey (NSF WebCASPAR Integrated Science and Engineering Resources Data System)

## Research at UVI: A sampler

Research conducted at UVI spans a range of topics of critical importance to the Territory's economic and social development. Below we describe just a few examples.

- The *Center for Marine and Environmental Studies* conducts both lab and field research in marine and environmental science, with a particular focus on Caribbean coastal ecosystems. The Center's work includes a program, launched in 2001, that monitors the condition of the Territory's coral reefs, identifying specific sources of stress and recommending specific interventions aimed at preserving this vital natural resource. In 2013, CMES researchers working on this problem identified viruses as a possible cause of the "white plague" disease that during the past decade has severely affected the region's coral. This could prove to be a key first step toward finding ways to manage the disease more effectively, and even to prevent it.
- The *Caribbean Green Technology Center* at UVI, created in 2011, is engaged in research related to the development of alternative and renewable energy technologies – including solar and biofuels – and their deployment in the U.S. Virgin Islands and elsewhere in the Caribbean. In addition to its own research, the Center works in partnership with two U.S. Department of Energy labs, the National Renewable Energy Laboratory in Colorado and Brookhaven National Laboratory in New York. The Center also advises the government of the Virgin Islands on policy issues relating to renewable energy.
- UVI's *Agricultural Experiment Station (AES)*, located on the University's St. Croix campus, conducts basic and applied research related to increasing agricultural production in the Territory, improving the efficiency of agricultural operations, protecting the Islands' natural resources and developing new agricultural businesses.



Researchers at AES have developed a “closed-loop” aquaponics system that recycles water used in the production of farm-raised fish such as tilapia for use in hydroponic production of fruits, vegetables, herbs, and flowers. The technology can be used both on a commercial scale and in small-scale back-yard applications. Each year, the AES conducts workshops that train 100 people from around the world in the development and operation of aquaponic systems. UVI also helped to construct a facility at the Ivanna Eudora Kean High School on St. Thomas that is used to train students in aquaponics.

- UVI’s *Water Resources Research Institute* is one of 54 such research centers nationwide operated by U.S. land grant universities. The Institute conducts research on water quality and in related areas. A major focus of its work has been the use of rainwater cisterns as a source of domestic water – a major component of the Territory’s water supply system.
- The University’s *Eastern Caribbean Center* conducts research on socioeconomic conditions and trends in the U.S. Virgin Islands and elsewhere in the region, and on conservation of the region’s natural resources. The Center conducts the decennial census for the USVI and serves as the U.S. Census Bureau’s data center for the Virgin Islands.
- The School of Nursing’s *Caribbean Exploratory Research Center (CERC)*, funded by a grant from the National Institute for Minority Health and Health Disparities, conducts research on health disparities in the USVI and elsewhere in the region. The Center’s research focuses on factors that may adversely affect the health of the local population, and that may impede access to health services, including poverty, lack of health insurance, low levels of education and the growth of the Territory’s immigrant population.

## Undergraduate research at UVI

Undergraduates benefit in several ways from participation in research projects. They gain experience in working as part of a team – in collecting, organizing and analyzing data – and in communicating the results of their work. For those who plan to pursue advanced degrees in science, participation in research projects also helps prepare students for graduate work.

Undergraduate students at UVI have a variety of opportunities to participate in research throughout the academic year and during the summer. Below we cite several examples of programs through which UVI supports undergraduate research.

- Through UVI’s *Agricultural Experiment Station (AES)* on St. Croix, undergraduates have the opportunity to work with AES research faculty on research projects in the areas of animal science, biotechnology and agroforestry, forage agronomy, horticulture, and aquaculture.
- The *Minority Access to Research Careers (MARC)* program provides undergraduate UVI students interested in careers in biomedical research with the opportunity to participate in research projects with faculty mentors, and attend and present at scientific conferences. MARC students also have the opportunity to participate in summer research projects at partner institutions including Johns Hopkins University, Cornell University, and the University of Pennsylvania. The MARC Research Traineeship program, funded by the NIH, supports six UVI undergraduates (three juniors and three seniors) with up to \$3,000 in tuition and fees (and coverage of 60 percent of costs over \$3,000), a \$900 monthly stipend and funds for travel for research training.

The MARC program has been in place at UVI since 1992. During the past ten years, 13 UVI MARC alumni have earned Ph.D. degrees from top-ranking universities including New York University, University of Michigan, Purdue University, Emory University, Carnegie Mellon, Howard University, and the University of California San Diego. In 2011, UVI was awarded a five-year \$1.5 million grant from NIH's MARC program.

- Through the *Summer Undergraduate Research Experience (SURE)* program, undergraduate students majoring in science, mathematics or engineering at UVI have the opportunity to gain research experience working full-time with UVI faculty members during a 6-8 week non-residential program during the summer. Students are expected to attend research conferences both on- and off-campus throughout the program and present their work at the Summer Research Symposium upon completion of the program. The program, which rewards students with a \$2,500 stipend, supported 14 undergraduate students during the summer of 2013.
- The *Summer Sophomore Research Institute (SSRI)* provides sophomores and rising juniors majoring in STEM fields with the opportunity to learn basic research methods and techniques. During the six-week residential program, students work on-campus with UVI faculty while also participating in workshops on research methods. The program, which provides students with a stipend, supported 10 sophomores and rising juniors during the summer of 2013.
- The *Historically Black Colleges and Universities Undergraduate Program (HBCU-UP)* provides up to 10 full-time undergraduate students with the opportunity to work with faculty mentors on STEM research projects during the academic year, while also per-

forming community service. Funded by the National Science Foundation (NSF), the program rewards students with a \$600 monthly stipend to work with a faculty mentor on a research project, as well as summer stipends for summer research projects either at UVI or at other participating institutions.

- Undergraduate students interested in a career in biomedical research have the opportunity to work with UVI faculty on research projects during the academic year, and to work with off-island mentors during the summer through the *Minority Biomedical Research Support – Research Initiative for Scientific Enhancement (MBRS-RISE)* program. The program, which is funded by the National Institute for Health (NIH), pays up to 10 students \$12 per hour for up to 15 hours of work per week during the academic year and 35 hours per week during the summer.
- Undergraduate students may also pursue their own research projects through for-credit *Directed Independent Research (DIR)*. During the academic year 2012-2013 (including the summer of 2013), 24 undergraduate UVI STEM students were enrolled in for-credit DIR.

In addition to these programs, undergraduate students may participate in a variety of workshops, seminars, and conferences hosted by UVI's Emerging Caribbean Scientists (ECS) program that focus on areas such as grant writing and applying to graduate school.

Overall, during academic year 2012-2013 (including summer 2013), 71 undergraduate STEM students at UVI participated in undergraduate research opportunities.



## PART FIVE: ENTREPRENEURSHIP AND ECONOMIC DEVELOPMENT

Returning the economy of the U.S. Virgin Islands to a path of sustained (and sustainable) economic growth depends in part on the Territory's success in creating and developing new businesses. UVI is working in several ways to help the Territory develop a more innovative, entrepreneurial and sustainable economy.

## Educating a new generation of entrepreneurs

UVI has undertaken several initiatives aimed at preparing students for careers as entrepreneurs.

- Undergraduates enrolled in any of UVI's degree programs may pursue a **minor in entrepreneurship**. Established in 2012 and offered through the School of Business, the minor consists of several business foundation courses including accounting, finance, marketing, and management, as well as a series of six courses that focus on the fundamentals of entrepreneurship. (As discussed below, the School of Business is now planning to convert the entrepreneurship minor into a certificate program.)
- UVI's **13D Student Entrepreneurship Competition**, launched in the fall of 2011 with funding provided by Kiril Sokoloff, founder of 13D Research, gives teams of UVI students an opportunity to learn the basics of launching a business by developing and presenting plans for the creation of new business ventures in the Virgin Islands. In the program's first year, 21 teams including a total of 72 students participated. In May 2012, the three winning proposals – for an egg farm, a lab equipment rental business and a skating center – shared \$60,000 in prize money.

In the program's second year, the number of UVI students participating in the competition grew to 109. The winners announced in May 2013 included plans for a shrimp farm, a business selling paddling and sailing equipment, and an online shopping site aimed at giving customers who are living abroad access to items that are not readily available in the countries where they currently reside.

In 2012-13, the 13D program also added an entrepreneurship competition for USVI high school students.

- In addition to the student entrepreneurship competition, 13D Founder Kiril Sokoloff has also funded an endowed chair in entrepreneurship at UVI, and an entrepreneurial speaker series.

## Supporting small business development

Along with the support it provides to aspiring student entrepreneurs, UVI also serves entrepreneurs throughout the broader community.

- Operating both on St. Thomas and St. Croix, UVI's **Small Business Development Center (SBDC)** provides training and technical assistance to a wide range of small businesses. Among others, the Center's programs include a ten-week course in business planning, a course on "how to start a business in the Virgin Islands" and training in the use of Quickbooks. The Center also provides one-on-one consulting and counseling to individual business owners and aspiring entrepreneurs in retail, health care and consumer service businesses.

The SBDC reports that in fiscal year 2013 it:

- Conducted 211 training sessions, with a total of 1,769 people participating, averaging more than three hours of training per participant; and
- Provided one-on-one counseling to 322 individual clients; each client was seen an average of four times, for an average of 7.4 hours.



- As noted above, the College of Business is planning to convert its entrepreneurship minor into a for-credit *certificate in entrepreneurship*. This will make the program accessible both to UVI students and to aspiring entrepreneurs in the community.
- In 2013, UVI announced a power purchase agreement with New Generation Power (NGP), a Chicago-based solar energy company, under which NGP will build new *photovoltaic energy plants on UVI's St. Thomas and St. Croix campuses*. The University estimates that the new facilities, which will have a combined capacity of approximately 3 megawatts, will substantially reduce UVI's reliance on electricity generated from fossil fuels – and substantially reduce its energy costs as well. These new facilities will also allow UVI, in partnership with the Illinois Institute of Technology (IIT), to expand its programs of research on renewable energy.

## Collaborating in economic development

The University also contributes to the rebuilding of the USVI economy through its participation in projects that enhance UVI's ability to fulfill its mission and at the same time help address some of the Territory's most pressing economic challenges.

- The 10-acre *Research and Technology Park*, located on the University's St. Croix campus, was created "to position the USVI as a near-shore, world-class provider of e-commerce and information technology infrastructure solutions for knowledge-based, e-commerce and digital content companies." The Park's first 18,000-square-foot building was started in 2011 and completed in 2013, at a cost of \$13 million.

While the new building provides a physical hub for the Park's activities, RTPark client companies can be located anywhere in the Territory. Companies participating in the program are eligible for significant tax benefits, and in exchange commit to remaining in the Virgin Islands and providing scholarship funds to UVI. As of December 2013, 18 companies were participating in the program, including providers of telecommunications and broadband services, e-commerce companies, on-line content providers, and financial services companies. Together they employ approximately 220 people in the USVI.

In 2014 the University announced that Veriown Energy, a subsidiary of New Generation Power, would work with UVI and IIT to develop microgrids on UVI's St. Thomas and St. Croix campuses, providing enhanced energy storage and distribution capacity for the new solar systems. The microgrid project is being financed with a \$3 million grant from the U.S. Department of Agriculture.

In addition to reducing its own reliance on higher-cost, carbon-based electric power, the University sees its partnership with NGP and IIT as an important step in the transition to lower-cost, more sustainable sources of energy, both for the U.S. Virgin Islands and for the Eastern Caribbean region more broadly; and as an opportunity to train students in the development and operation of solar and microgrid technology.



## PART SIX: OUTREACH AND COMMUNITY ENGAGEMENT

Strong economies are built on a foundation of strong communities. As a public land grant institution, UVI plays a unique role in the ongoing development of the economy of the U.S. Virgin Islands through its mission of outreach and service to its community. This part of the report focuses on:

- Services provided to the Virgin Islands community through UVI's Cooperative Extension Service;
- UVI's role as a cultural resource for the community;
- The University's role in improving education and expanding educational opportunities for young Virgin Islands' residents; and
- Other initiatives and programs through which the University seeks to strengthen Virgin Islands communities.

## UVI cooperative extension

UVI's designation in 1972 as the Territory's land grant institution brought with it funding for the establishment and operation of a Cooperative Extension Service (CES). The Extension Service seeks to promote sustainable development of the Territory's agricultural sector, sound management of its natural resources, and strengthening of its communities through an array of training and technical assistance programs offered to USVI residents. Here we provide just a few examples.

- The **Beginning Farmer Development Program** provides training for new farmers in both crop and livestock production. In addition to technical and field training, the program also covers the business side of farming, including planning, financial management and marketing. The program's goals include developing a new generation of farmers in the Virgin Islands, giving them the tools they need to succeed and to increase their earnings.
- The Extension Service's **livestock programs** assist the Territory's farmers in improving both beef and dairy production. In the 1970s, what was then the College of the Virgin Islands worked with local farmers on St. Croix on the development of Senepol cattle – now a globally-recognized breed that is especially well suited to beef production in tropical countries.
- The CES **Home Demonstration Garden**, located on the St. Thomas campus, provides a site where Virgin Islands' residents can learn about producing fruits, vegetables and ornamental plants at home using raised bed and box gardening, mulching techniques, and drip irrigation technology.
- **4-H** is the Extension Service's largest pro-

gram – a comprehensive youth development program, run by adult volunteers, that combines hands-on learning about agriculture and natural resources with life skills training and training in specific areas such as computer skills. The program also includes the 4-H Summer Academy, which is described below.

- CES regularly offers **computer training** both on St. Thomas and on St. Croix. These courses and workshops cover topics such as basic computer skills, use of the Internet and social media, and the use of popular programs such as Microsoft Excel and PowerPoint.
- The CES **Expanded Food and Nutrition Education Program** is aimed at helping low-income families learn to make better food choices, prepare more nutritious meals, and manage limited food budgets more effectively.

While the examples above offer a sense of the range of services CES provides, the following numbers provide a sense of the size of the audience it reaches: CES reports that in fiscal year 2013, participation in all CES programs and activities – such as participants in training courses and workshops, attendance at 4H meetings, and individual consultations with clients either in CES's offices or on-site – totaled 61,936.

## Education and youth development

UVI also seeks to strengthen the community it serves by strengthening elementary and secondary education in the Virgin Islands, by expanding educational opportunities for the Territory's younger residents.

- UVI's **4H Summer Academy** is a six-week enrichment program for children ages 5 through 14, offering instruction in the arts,

reading, mathematics, science, writing, computer skills, and other areas, with an emphasis on development of critical thinking and problem-solving skills. During the summer of 2013, 301 students participated in the program, which is offered at both the St. Croix and St. Thomas campuses.

- The **Virgin Islands Environmental Resource Station (VIERS)** is an environmental education and research center located on Lameshur Bay on St. John, and operated by a non-profit organization affiliated with UVI. Each summer, VIERS offers “eco-camping” and science camps for children and teenagers (ages 7 to 17), which are available free of charge to students in Virgin Islands schools. During the summer of 2013, 288 students participated in these camps.
- **University Bound** is a program for high school students who have shown academic potential but who may not be prepared for college-level work. The program includes Saturday sessions during the academic year plus an intensive, six-week on-campus resident component during the summer. University Bound combines classroom instruction with small-group and individual tutoring, counseling, and college admission information, along with social, cultural and recreational activity. In 2012-2013, 52 students participated in the program.
- Education beyond high school is increasingly critical to success in the job market – but in the Virgin Islands as elsewhere in the U.S., young men have fallen behind their female counterparts in college attendance and completion rates. The University’s **Male Initiative – Brothers with a Cause (BWC)**, launched in 2010 by President David Hall, seeks to attract more male students to UVI and to provide them with the tools and support they need to graduate. Specific initiatives include mentoring programs for male

middle and high school students, marketing that more specifically targets young men, and expanded academic support such as peer tutoring. BWC also sponsors Man Up – the Male Empowerment Conference, an inspirational and motivational event that annually attracts about 3,000 young men.

- **The Math Behind the Science** is a six-week, full-time summer “bridge” program for students who have completed high school, have been accepted into UVI or another college or university and are planning to study science, mathematics or engineering, but who need to improve their math skills in order to succeed in these fields. The program, which is offered at both campuses and is free to Virgin Islands’ residents, focuses primarily on preparation for introductory calculus. In 2013, 64 students participated in the program.
- The **Virgin Islands Writing Project** seeks to build the writing skills of elementary and high school students by increasing the use of student writing as a regular element of teaching across all disciplines. The Project operates primarily through a program of professional development for teachers in Virgin Islands’ schools.

## A cultural resource for the community

UVI is also an important cultural resource for the Virgin Islands.

- The **Reichhold Center for the Arts**, a 1,196-seat performing arts center that opened in 1979, is the principal performing arts venue in the U.S. Virgin Islands. During its 35-year history it has become not just an important resource for the University, but an important community institution as well,

presenting performances by artists as varied as Ray Charles, the Alvin Ailey Company, the Boston Pops Orchestra, the Ellis Marsalis Ensemble, Celia Cruz and Jimmy Cliff. The Center is also available on a rental basis for performances and other events presented by other local organizations.

The Reichhold Center is also a resource for local elementary and secondary schools. Through its Arts in Education program, featured artists work with hundreds of students – discussing their work, careers in the arts and tips about performing.

- UVI's *Little Theater* – a 100-seat black-box theater space – stages at least one play each semester, providing theater experience for UVI students, faculty and staff, and community residents as well.

- *The Caribbean Writer*, a leading regional literary journal founded in 1986, is published and edited at UVI. The journal publishes new work by established and emerging Caribbean writers, including short fiction, poetry, essays, plays and reviews. It also features visual art, including photography, by Virgin Islands' artists.
- One of the University's newest cultural initiatives, the *Virgin Islands Caribbean Cultural Center*, was launched in 2012. It serves as a focal point for efforts to research, document, preserve, and promote awareness of the rich culture and traditions of the Virgin Islands and of the Caribbean area more generally. The Center also seeks to strengthen the region's economy by promoting cultural tourism.



## Other community initiatives

In addition to the programs cited above, initiatives undertaken by UVI address a wide range of other community needs. For example:

- The *Virgin Islands University Center for Excellence in Developmental Disabilities (VIUCEDD)* was created in 1984 to help improve the quality of life of the Territory's disabled residents. The Center provides training, support and advocacy for the families of people with disabilities, and provides in-service training for schools and community organizations. In partnership with Banco Popular, VIUCEDD also provides loans of up to \$15,000 for the acquisition of assistive technologies that enable disabled people to work.

The Center has also helped to develop several degree and certificate programs that are now offered by the School of Education, including associates and bachelor's degrees in inclusive early childhood education.

- High levels of violent crime are an obstacle both to the recovery of the Territory's economy and to its residents' quality of life. UVI's *Anti-Violence and Peace Initiative*, launched by President Hall in 2012, brings together resources from across the University and from the broader community to work toward the goal of reducing violence (especially gang violence) in the Virgin Islands. Components of the initiative, which is managed by the University's Eastern Caribbean Center, include:
  - Research – for example, on gang culture in the Virgin Islands;
  - Policy development, such as recommendations for improving collection of data on juvenile crime and for strengthening ties between the Territory's courts and

its schools;

- Community outreach, including parent education and expanding efforts to prepare students (especially young males) for college; and
- Advocacy – promoting greater awareness of the problem of violence and encouraging greater support for efforts to reduce it.

## Building a stronger economy

Strengthening the Territory's economy may not always be a primary purpose of community programs such as those described above. But over time, programs aimed at serving other community needs can also serve the goal of economic development. They can do so in the following ways:

- Building the skills of the Territory's workforce, and raising the incomes of its less-skilled residents;
- Making the Virgin Islands a more attractive destination for tourists and other visitors, including cultural tourists;
- Inducing more of the Territory's talented young people to stay and build their careers in the U.S. Virgin Islands; and
- Making the Virgin Islands a more attractive place for people and companies from outside the Territory to live, work, invest and do business.

For these and other reasons, a stronger community can help provide a more secure foundation for the growth of the Territory's economy.



## PART SEVEN: CONTRIBUTING TO THE DEVELOPMENT OF THE EASTERN CARIBBEAN

As noted in Part One, UVI's impact can be viewed within the context of the U.S. Virgin Islands and also from the perspective of the wider regional community of Eastern Caribbean island states. This part of the report briefly highlights the multiple ways in which the University, through its mission of education, research, and service to the community, helps meet the needs of its Eastern Caribbean neighbors along with those of its home Territory.

## Developing the region's human capital

As they are elsewhere, investments in human capital are essential to the growth of the Eastern Caribbean regional economy and to improving the lives of the region's people. Since its founding, UVI has been providing opportunities for higher education to residents of other Eastern Caribbean states and communities.

Many of the degree programs UVI offers can help support economic growth and expansion of economic opportunity not just in the U.S. Virgin Islands but throughout the region as well, including those in marine and environmental science, hospitality and tourism management, engineering, computer science, nursing, and education. In order to expand access to these and other programs, UVI has for several years been negotiating memoranda of understanding (MOU's) with other Eastern Caribbean states and educational institutions. As of the spring of 2014, MOU's have been signed with four governments and three more are in various stages of negotiation.

The St. Kitts/Nevis MOU, for example, includes an articulation agreement with Clarence Fitzroy Bryant College (CFBC), a two-year college on St. Kitts, easing the transfer of CFBC students into bachelor's degree programs at UVI. The MOU also sets tuition for St. Kitts/Nevis students, at 1.75 times the rate for U.S. Virgin Islands – a substantial discount from the full tuition rate for out-of-Territory students. The government of St. Kitts/Nevis will provide 25 scholarships (up to \$7,500 each) for its students attending UVI, and will also provide study-leave scholarships for six government employees to attend UVI. In addition, the St. Kitts/Nevis government is providing space that UVI faculty can use to do consulting work, and to support faculty exchanges and collaborative research.

As of February 2014, a draft MOU with the government of Grenada was under review, and discussions were under way with the governments of Anguilla, St. Martin, and Antigua and Barbuda.

UVI is also expanding its capacity to serve residents of other Eastern Caribbean communities through its on-line learning programs. The University's Center for Community Engagement and Lifelong Learning (CELL) offers more than 500 courses on-line, ranging from fundamentals such as GED preparation to individual career-oriented courses in areas such as accounting and information technology to programs that lead to certificates in fields such as customer service and dialysis technology. Programs such as these can make it easier for residents of other islands who cannot travel to St. Thomas or St. Croix for classes to take advantage of the learning opportunities that UVI offers.







## UVI Alumni: Serving the Region's Citizens, Building the Regional Economy

While most UVI alumni live in the U.S. Virgin Islands, hundreds of University graduates are residents of other Eastern Caribbean states. UVI graduates are well-represented among leaders in government, commerce, education, health care, religion and culture across the region. Below we cite just a few examples.

- Vance Amory, Premier of Nevis
- Richard Arindell, Education Coordinator, St Martin Academy, St. Martin
- Debbie Brown, Head Teacher, Golden Rock Elementary School, St. Eustatius
- Dr. Trevor Connor, an Anguillan dentist with practices on Anguilla, St. Thomas and Tortola
- Janet Harris, Alternate Executive Director for Canada, Ireland, and the Caribbean, The World Bank, former Financial Secretary, St. Kitts/Nevis
- Aylmer Irish, CEO of the National Cooperative Credit Union, Dominica
- L. Everette Martin, General Manager, Bank of Nevis Ltd.
- Eileene Parsons, OBE, former Deputy Chief Minister, British Virgin Islands
- Robert Philip, Counselor, Ministry of Education, Grenada
- Linette Rabsatt, poet and free-lance writer, British Virgin Islands
- Richard Skerrit, Rhodes Scholar, Minister of Transport and Tourism, St. Kitts/Nevis
- Dr Ellis Webster, ear-nose-throat specialist, Anguilla
- Lucia Woods, Pastor, Agape Total Life Center, British Virgin Islands

## Research that benefits the region

Much of the research conducted at UVI can benefit not only the U.S. Virgin Islands but its neighbors as well, as is seen in the following examples:

- Research conducted at the *Center for Marine and Environmental Studies* aimed at better understanding and protecting the USVI's coral reefs can help the region's other island communities in protecting this vitally important resource as well.
- The mission of UVI's *Caribbean Green Technology Center* is explicitly regional, aimed at developing more sustainable, lower-cost sources of energy that can be used not only in the U.S. Virgin Islands but throughout the Eastern Caribbean.
- The School of Nursing's *Caribbean Exploratory Research Center* conducts research on health disparities throughout the region.
- The *Eastern Caribbean Center* conducts research on socioeconomic conditions and trends in the region, and on the conservation of natural resources.
- The UVI *Agricultural Experiment Station's* work in aquaponics, animal science and forestry can also benefit communities throughout the region.

## Culture and community

UVI also serves the Eastern Caribbean through its commitment to preserving and promoting Caribbean culture. As noted in Part Six, the University's *Virgin Islands Caribbean Cultural Center* seeks to research, document, preserve and promote wider awareness of the region's culture and to strengthen its economy by promoting cultural tourism. UVI is also home to *The*

*Caribbean Writer*, a leading regional journal of literature and the arts.

UVI has also been a leader in efforts to address social problems that affect communities throughout the region. Examples include:

- Research into the causes of gang violence, and the development of strategies for preventing it; and
- Programs aimed at improving educational outcomes and expanding economic opportunity for young men.

By helping to build stronger communities throughout the region, UVI is helping to provide a strong foundation for the continued growth of the region's economy.



## PART EIGHT: UVI AND THE FUTURE OF THE VIRGIN ISLANDS ECONOMY

As this report shows, the University of the Virgin Islands is a major contributor to the economy of the U.S. Virgin Islands. Over the course of the next five to ten years, however, the University's impact could be even greater than it is today.

## The growing impact of new academic programs

During the past several years UVI has launched new programs that are closely aligned with the needs of some of the Territory's leading industries. They include degrees in marine and environmental science, hotel and tourism management, computer science, and computational biology. As more and more graduates of these programs enter the USVI workforce, their contribution to the ongoing development of the Territory's economy should steadily increase. Other new programs being planned will have a similar impact.

The most important of these new programs is likely to be the UVI School of Medicine, which is expected to enroll its first class of future physicians during the 2016-2017 academic year. The establishment of the new school will help the U.S. Virgin Islands and the region address a projected shortage of physicians, and enhance the overall quality of health services available to the Territory's and the region's residents. It will help attract talented students and faculty to UVI. The new school will also expand the scope of the University's research enterprise, attracting both federal and private research funding to UVI, and creating opportunities for the development of new businesses based on biomedical research conducted at the University.

## A stronger emphasis on entrepreneurship

As described in Part Five of the report, the University has also sharpened its focus on entrepreneurship and innovation as one of the keys to revitalization of the Territory's economy.

- In 2012, UVI introduced a new minor in entrepreneurship that provides an opportunity

for undergraduate students in a variety of disciplines to learn the basics of starting and successfully developing a business.

- The 13D Student Entrepreneurship Competition, launched in 2011, gives teams of UVI students hands-on experience in planning a new venture, and provides cash prizes to those who present the most promising business ideas.
- UVI is now exploring conversion of the entrepreneurship minor into a certificate program – a move that would make the program more accessible both to students and to aspiring entrepreneurs in the community.

Over the next five to ten years, as each successive cohort of young entrepreneurs graduates from UVI, these and other new programs should begin to have a significant impact on the rate at which new businesses and new jobs are created in the U.S. Virgin Islands.

## A catalyst for economic development

Parts Four and Five of the report also highlighted two projects that exemplify the University's potential as a partner in efforts to address some of the Territory's most pressing economic problems.

- When fully operational, the solar power plants and microgrids now being developed at UVI's St. Thomas and St. Croix campuses will sharply reduce the prices the University pays for electricity. The University is seeking through this project not only to reduce its own costs, but also to point the way to a less costly, more sustainable energy future for the Virgin Islands and for other Caribbean communities.
- The 2013 completion of the first new build-

ing in the ten-acre Research and Technology Park on the St. Croix campus provided a new home not only for UVI's College of Science and Mathematics, but also for the Research and Technology Park Corporation. While the incentives the Corporation offers are available to eligible companies regardless of where in the Territory they choose to locate, the Park's location on the St. Croix campus opens up new opportunities for companies that might be interested in co-locating and collaborating with the University.

### *Higher education as an export*

As countries around the world have come to see the growth of their college-educated workforce as essential to their continued economic growth and competitiveness, demand for higher education is increasing. While this trend highlights the importance of UVI's role in developing the Territory's human capital, it also creates an opportunity to strengthen the economy of the U.S. Virgin Islands by expanding the University's role as an "exporter" of higher education – both to the U.S. mainland and to other countries, especially countries in the Eastern Caribbean.

In line with its strategic plan for 2012-2017, UVI will be seeking to increase enrollment from outside the Territory by:

- Expanding its on-line programs, and creating satellite centers that combine on-site and on-line instruction;
- Entering into agreements with other Eastern Caribbean states under which their governments will support education of their citizens at UVI;
- Expanding its efforts to market UVI to prospective students on the U.S. mainland; and
- Establishing its new School of Medicine.

Attracting more students from outside the U.S. Virgin Islands can help the University increase

tuition revenues, and more broadly increase revenues coming into the Territory from elsewhere. At the same time, attracting more students from the mainland and from elsewhere in the region can help raise the visibility of the U.S. Virgin Islands, and can create connections to students' home states and countries that endure beyond graduation.

## **A stronger community**

Over time, the U.S. Virgin Islands will also benefit economically from UVI's efforts to strengthen the communities it serves. It can do so, for example:

- By helping Virgin Islands residents – especially low-income adults and young people with a limited education – acquire the basic, job-specific and life skills they will need to increase their incomes and improve their lives;
- By helping to improve the quality of elementary and secondary education in the Virgin Islands, and expanding educational opportunities for the Territory's young residents;
- By working with a wide range of community partners to reduce violent crime in the Virgin Islands; and
- By increasing awareness of and appreciation for the Territory's Caribbean culture – as a shared heritage for residents of the Virgin Islands and other Eastern Caribbean communities, and also as a cultural resource that can be marketed to visitors and to other consumers of culture.

For these and other reasons, UVI is likely to play a central role in helping the U.S. Virgin Islands overcome the economic setbacks it has suffered during the past few years, and in returning the Territory to a path of sustained economic growth.





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