

Testimony Presented To

The House Subcommittee on Education and Economic Development

The Senate Subcommittee on Education, Business and Administration

By President Janet Dudley Eshbach, Ph.D.

February 2016



I am grateful for the opportunity to testify again before the Maryland General Assembly to discuss Salisbury University's remarkable accomplishments, while shedding light on some of our persistent challenges.

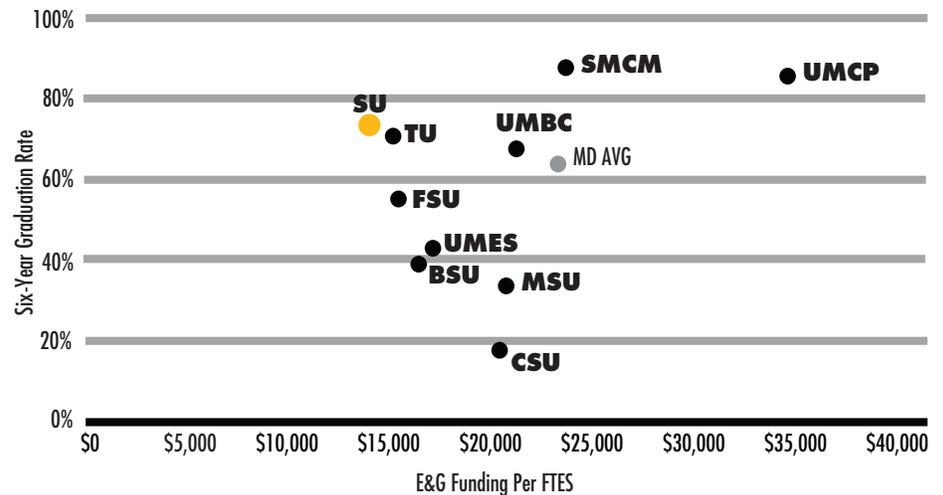
It is clear that budget circumstances have improved dramatically and I publicly thank Governor Hogan and the General Assembly for working diligently to manage the State's fiscal challenges of recent years. Your strong support of the University System of Maryland (USM) speaks to your dedication to ensure that Maryland's workforce is well prepared to compete in the emerging economy of the 21st century.

In order for the USM to meet the State's ambitious degree completion and workforce development goals, while keeping an eye toward efficiency and effectiveness, funds need to be strategically invested at institutions like Salisbury University, which have demonstrated significant progress toward these objectives. SU is proud of the fact that we have consistently achieved strong results at a significantly lower cost to the State of Maryland and our students.

Efficient, Effective and Excellent

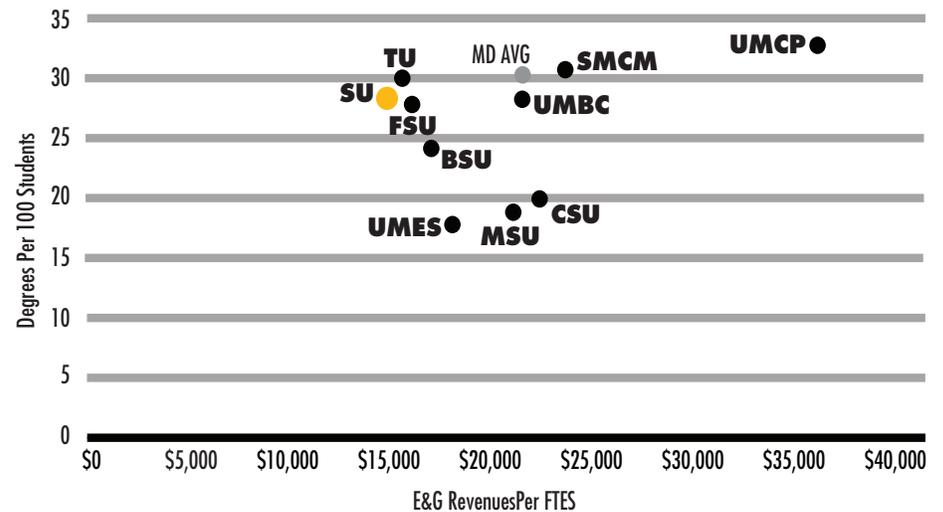
Salisbury University continues to be recognized across the State and nation as an efficient and effective institution. SU has been named a "Model of Efficiency" by *University Business* and, for the fourth year in a row, was highlighted by the Department of Legislative Services (DLS) in their FY2017 *Higher Education Overview*. DLS analysts point out, "SU, in particular, has a graduation rate of 72.9% while receiving the least revenue per FTES [Full Time Equivalent Students] statewide." (Figure 1) Additionally, Salisbury University awards the highest number of degrees per 100 FTES, while receiving the least amount of resources per student (Figure 2).

Figure 1: E&G Revenues Per FTES and Six-Year Graduation Rates (FY2014)



Source: Maryland Higher Education Commission; Governor's Budget Book, Fiscal 2017

Figure 2: E&G Revenues Per FTES and Degrees (FY2015)



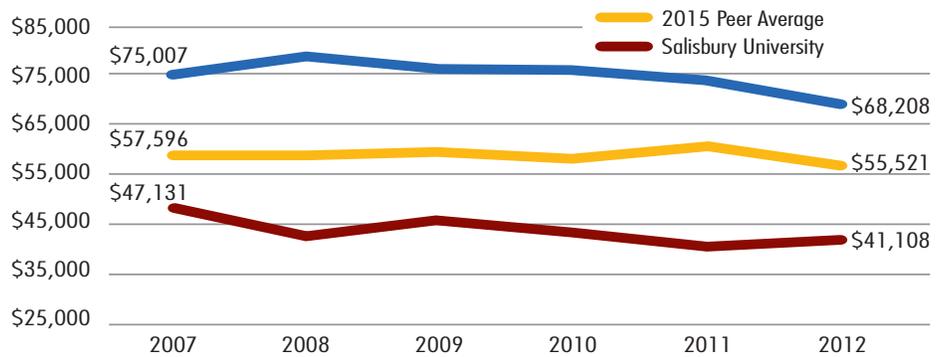
Source: Department of Budget Management; Department of Legislative Services

To this end, if the State is interested in increasing the number of degrees produced annually, then additional resources should be devoted to institutions that have capacity to grow and the demonstrated results to prove that they are a worthy investment. Salisbury University can graduate a student for nearly \$30,000 below the average cost of other USM schools (Figure 3). As Figures 4 through 6 show, SU consistently boasts some of the highest graduation and retention rates, while maintaining the lowest average time-to-degree. Clearly, additional investment at SU will increase the number of graduates in the most efficient and cost-effective manner.

Salisbury University remains among the State's most affordable options for graduating high school seniors compared to our sister USM schools (Figure 7). While institutions across Maryland and the country are experiencing a decline in the number of applications, SU's demand remains strong. For the fall class of 2015, nearly 8,400 students applied to fill a class size of just under 1,200 seats. Additionally, SU maintained its solid academic profile for its incoming students: average SAT scores increased three points from fall 2014 to 1,730, and the average incoming grade point average for all first-time students remains high at 3.69.

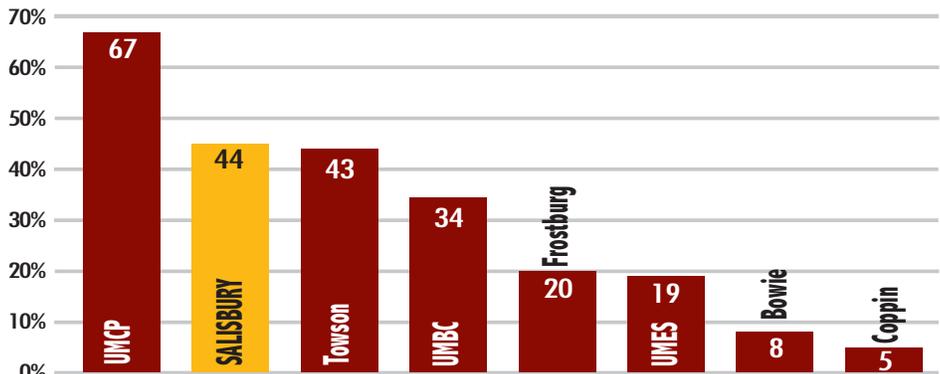
It is important to note that while undergraduate first-time student enrollment increased by 3 percent from fall 2014 to fall 2015, total undergraduate enrollment was down by 2 percent. This is attributable to a number of factors. In spring 2014, SU graduated the largest class in institutional history. At the same time, transfer student enrollment has dropped. As the *Higher Education Overview* points out, not only are there fewer first-time/full-time students entering higher education within the State, but enrollments at community colleges are significantly down. Further, because of Salisbury University's chronic underfunding, compared to that of our sister institutions, we have not been able to carve out the resources necessary to offer sufficient financial aid packages to compete with other Maryland

Figure 3: 2007-2012 Average Education and Related Costs Per Degree



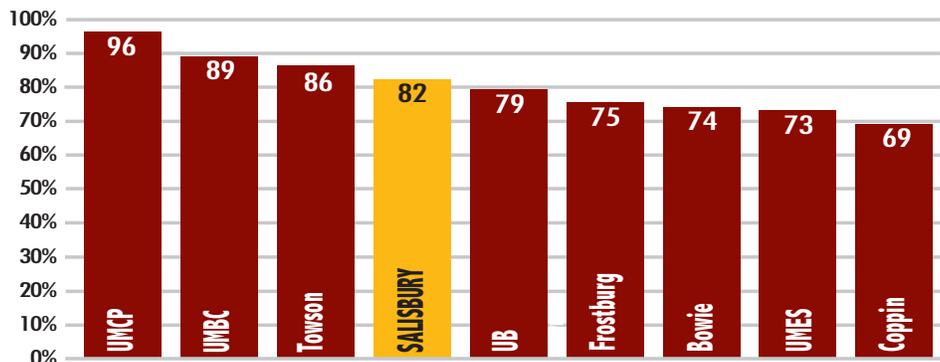
Source: Delta Cost Project - utilizing data from IPEDS Database from 2007 to present

Figure 4: Four-Year Graduation Rates (2008 Cohort)



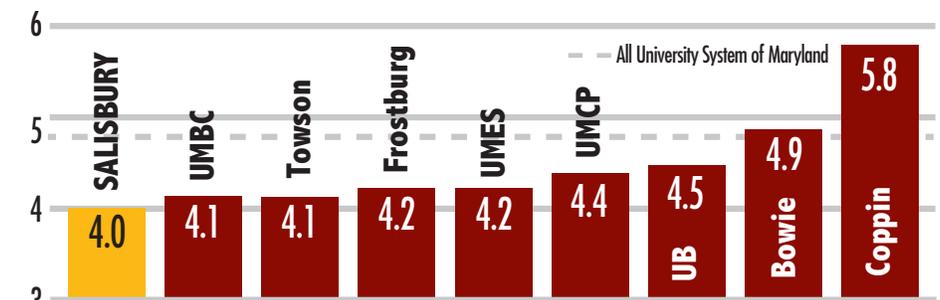
Source: Utilizing data from IPEDS database

Figure 5: Second-Year Retention Rates (2013 Cohort)



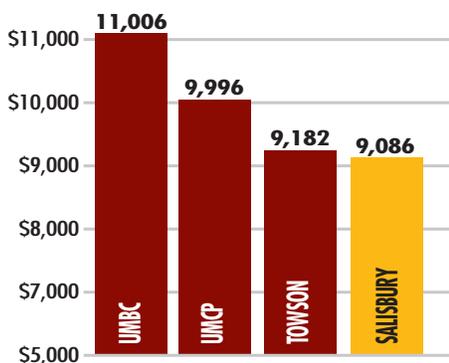
Source: Utilizing data from IPEDS database

Figure 6: Average Undergraduate Time-to-Degree in Years (FY2015)



Source: university system of maryland's Faculty workload report, 2015

Figure 7: Cost of Attendance (FY2016)



Total cost of attendance includes tuition, technology fee and auxiliary fees.

institutions or attract students from this shrinking pool of transfer applicants. As Figures 8 and 9 demonstrate, Salisbury University has consistently remained at the bottom of the University System of Maryland as it relates to Education and General Revenue as well as General Fund Appropriation, even despite our outstanding outcomes.

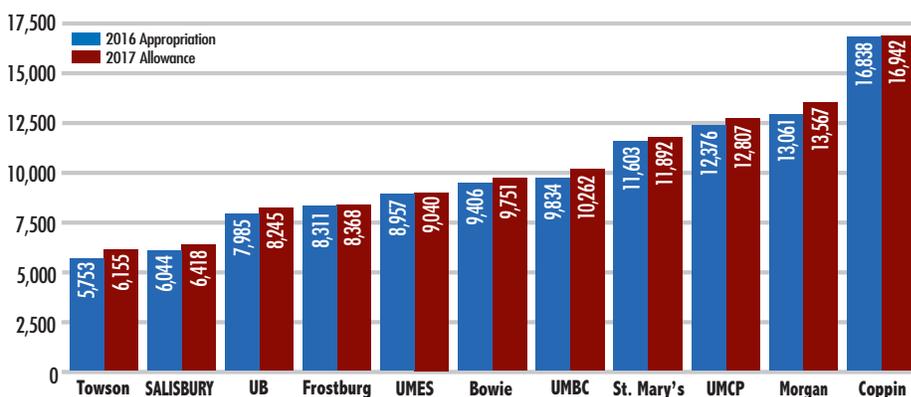
This underfunding has come at a price, namely, increased costs for students without commensurate financial aid resources to offset their impact. Figure 10 highlights that Salisbury University has the highest percentage of student loans compared to the rest of the University System of Maryland. Salisbury University is only able to allocate 11.7 percent of the revenue we generate from tuition and fees to our institutional aid budget (Figure 11); again, a factor of our low State appropriation per FTES. Given SU's excellent performance and student demand, our consistent underfunding is a disservice to our students and the citizens of the State of Maryland, and places a greater burden on out-of-pocket expenses and/or loan debt as compared with students attending other USM institutions. With Salisbury University's lowest time-to-degree and lowest cost-per-degree, why would the State not invest more resources at SU, where we can produce higher numbers of graduates in less time and for a lower cost?

Figure 8: Education and General Revenue per FTES Public Four-Year Institutions

	2012	2013	2014	2015	Working 2016	Adjusted 2017
UM, Baltimore	69,143	73,223	74,161	79,932	84,452	86,374
UMCP	31,431	32,303	34,425	35,984	37,165	38,389
St. Mary's	24,874	22,945	23,420	23,611	28,214	27,213
UB	21,422	21,626	22,182	23,509	24,572	24,528
UMBC	19,178	19,764	20,958	21,534	22,981	23,840
Morgan State	18,183	19,740	20,509	21,088	22,197	23,821
Coppin	19,111	19,278	20,185	22,372	22,842	23,331
Bowie	15,316	15,870	16,179	16,832	18,240	18,495
Frostburg	14,657	14,857	15,217	16,036	16,825	17,492
UMES	16,068	16,122	17,001	17,964	17,464	17,211
Towson	14,680	14,531	14,815	15,576	16,253	16,744
Salisbury	12,441	13,181	13,786	14,765	15,332	16,297
UMUC	14,846	14,421	13,843	12,716	12,980	13,302
Average	\$20,033	\$20,658	\$21,450	\$21,881	\$22,742	\$23,431

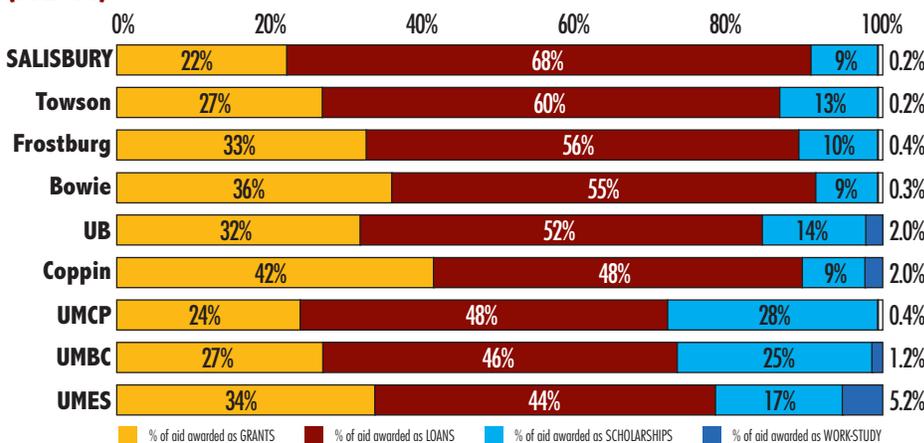
Source: Department of Legislative Services; Higher Education Fiscal 2017 Budget Overview

Figure 9: State General Fund Appropriation (not including tuition and fees)



Source: 2017 Governor's Budget Book

Figure 10: Financial Aid Comparison Among Maryland Public Institution by Type of Aid (FY2014)



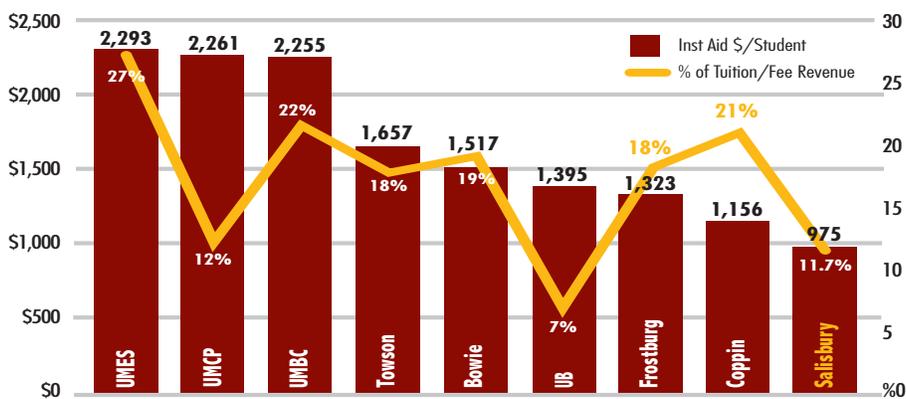
Source: Financial aid data is from MHEC's FAIS Report and is provided by Parris Jackson

Patricia R. Guerrieri Academic Commons Funding Request

As I brought to your attention during last year's budget cycle, an additional challenge that results from our low level of funding is that Salisbury University's faculty and staff have among the highest workloads in the State. As you can see in Figures 12 through 14, our student-to-faculty and -staff ratios are among the highest in the USM.

This is particularly alarming as Salisbury University is scheduled to open our 218,000-square-foot Patricia R. Guerrieri Academic Commons facility in August 2016 with no additional operating resources currently allocated to hire new faculty or staff (as is customary when new buildings are brought online). While I am extremely grateful for the State's work to secure the capital budget resources to fund this much-needed project, I am very concerned about our ability to maintain the State's investment. Moving from a 57,000-square-foot library built for 2,500 students, to a state-of-the-art building of 218,000 square feet, requires the hiring of new staff to administer the programming and maintain the facility. The Academic Commons will house a number of student support initiatives critical to student retention and success. It simply is not feasible or prudent to open this facility without the proper support staff, maintenance mechanics and housekeepers necessary. My office has been working with the Governor's Office to draft a supplemental budget to help mitigate some of the calculated \$3 million annual cost to SU; however, we are unsure whether or not this effort will be successful. Any support this committee can provide in those conversations is much appreciated.

Figure 11: Institutional Aid Per Student (FY2014)



Includes institutional grants, institutional scholarships, athletic scholarships and private scholarships.

Figure 12: Number of Students Per Full-Time Staff/Faculty: Student Services (FY2016)

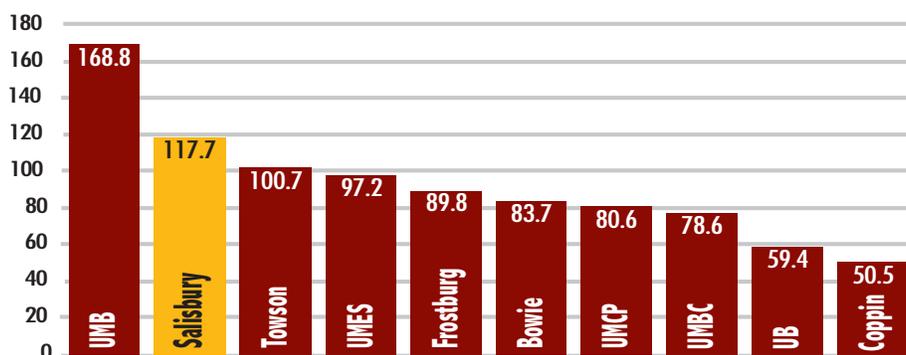


Figure 13: Number of Students Per Full-Time Staff/Faculty: Academic Support (FY2016)

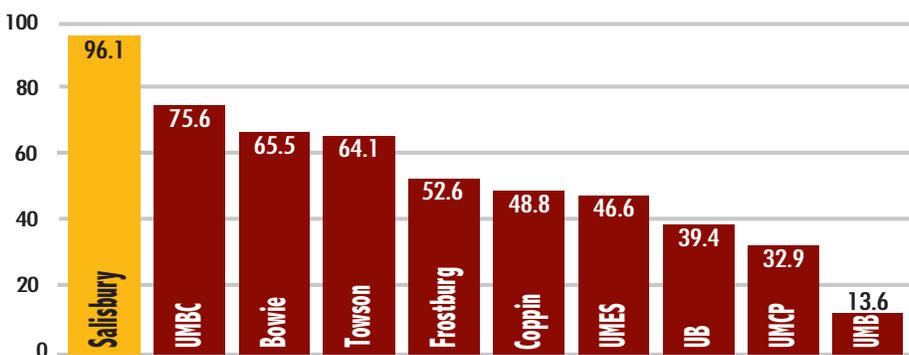
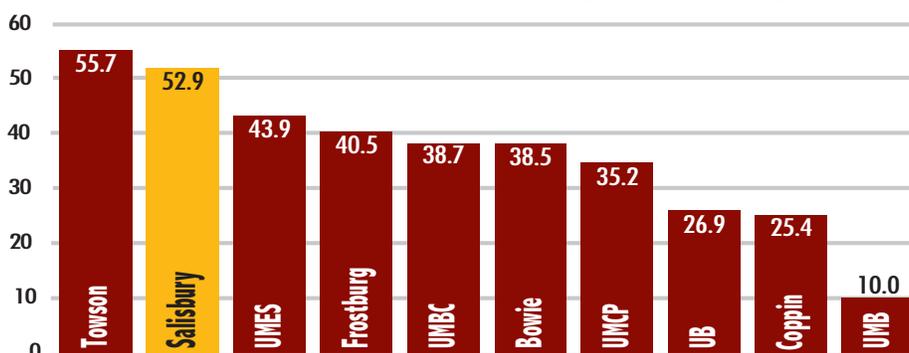


Figure 14: Number of Students Per Full-Time Staff/Faculty: Institutional Support (FY2016)



Source (Figures 11-13): Governor's Budget Books

Learning, Living, Leading – Working to Change Maryland, and USM, for the Better

Despite SU’s low funding, we continue to lead the way through innovative programming designed to improve our outcomes and to move the State’s economy forward.

■ Economic Development and Entrepreneurship

In his recent State of the State address, Governor Hogan noted that in the aftermath of the Great Recession “we must address chronic unemployment in the hardest hit areas of the State.” Among those areas mentioned, the Governor emphasized the importance of rebuilding the Lower Eastern Shore as a hub for thriving economic activity. A recent economic analysis report¹ notes that Salisbury University contributes some \$480 million dollars to the economy of the Lower Eastern Shore and supports nearly 3,000 jobs (Appendix 1). The report also demonstrates that SU is among the leading economic engines of the entire Eastern Shore. If Salisbury University were given the green light and concomitant funding support to grow in student enrollment, the Lower Eastern Shore would realize increased economic growth.

Additionally, Salisbury University’s much-touted entrepreneurship outreach programs have continued to establish the University as an important partner in revitalizing the businesses and industries of our region. Over the past five years, Salisbury University’s Small Business Development Center has helped launch among the highest number of start-up businesses in the State of Maryland.

Since 1987, SU’s Franklin P. Perdue School of Business has awarded nearly \$1,000,000 in total prize money to student and community start-ups as a part of its annual entrepreneurship competitions. Thanks in large part to a \$1 million gift by the Baltimore-based Philip E. and Carole R. Ratcliffe Foundation, since 2013, SU has been able to award up to \$200,000 annually to entrepreneurs from across the mid-Atlantic region seeking startup funding and business mentorship (Appendix 2).

For the past two years, we also have been proud to serve as the first small-market site for the hit ABC show *Shark Tank*, drawing hundreds of businesses from across the United States to audition on the campus of Salisbury University.

Additionally, SU is in the process of working with a donor to potentially establish a Center for Entrepreneurship, making use of the recently donated Gallery Building, located in downtown Salisbury. It is our hope that by providing accelerator, incubator and co-working space, paired with business support services, we will be able to continue the great work that our Perdue School of Business is doing, while supporting downtown development and job creation in Salisbury.

■ Degree Completion: The Strategic Use of Performance Analytics

In 2014, Salisbury University made the decision to partner with the Education Advisory Board’s (EAB) Student Success Collaborative to utilize performance analytics to improve the effectiveness and quality of SU’s student advising experience. Analysis of previous SU students’ academic patterns created a predictive model that was used to develop an indicator mechanism for the degree completion potential of currently enrolled students. Through the creation of a dashboard system, campus advisors are now able to monitor student progress toward degree goals and receive periodic updates regarding potentially risky patterns of behavior. This tool has been enormously helpful in counseling students into degree programs that maximize their personal strengths and ensure success post-graduation. Additionally, this tool has been used to facilitate targeted outreach campaigns to potential at-risk students to ensure that they are receiving the proper academic support in their chosen fields.

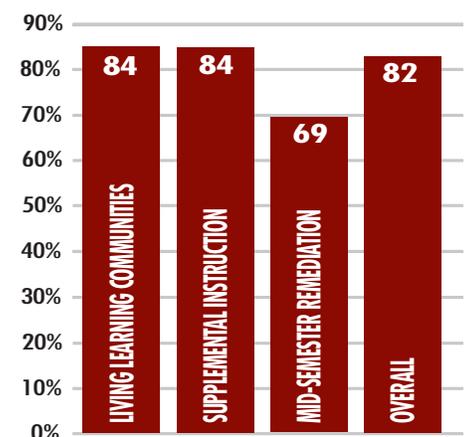
In 2015, SU joined EAB’s Academic Performance Solutions program, which will mine data from our student records, institutional financial information, past space allocation archives and human resources statistics to develop a series of reports on cost, critical capacity, enrollment and student outcomes at the university, school and department levels. These analytics will inform our resource

allocation decisions and help to further create a culture of data-driven decision making at Salisbury University. This will help us ensure that we are further effectively utilizing all of the resources with which we have been entrusted by the State.

■ Student Success Initiatives

Over the past several years, SU has worked hard to implement low-cost programs to sustain and improve our high retention and graduation rates. We have continued to increase the number and scope of our Living Learning Communities (LLCs) on campus (each LLC brings students with similar interests together to live and study) and, in 2014, implemented our Sophomore Year Experience (SYE) program, which offers experiences and support opportunities for sophomore students. Additionally, as a result of demand, we have increased our supplemental instruction offerings for some of our most difficult courses through the Center for Student Achievement (CSA). When the CSA began in fall 2009, it only served 231 students; today, the CSA serves nearly 3,700 students per semester and demand continues to rise. Our research shows that students who utilized CSA’s services not only received a higher grade in those courses compared to other students, they also had a 10 percent higher retention rate. Additionally, we have worked diligently to integrate targeted mid-semester remediation interventions. As Figure 15 highlights, these three initiatives have resulted in great success. We are excited that our CSA will be able

Figure 15: Retention Rates for Freshman to Sophomore Participants in Initiatives (2014 Cohort)



¹ *Economic Impact of Salisbury University On the Eastern Shore of Maryland*, February 2016, BEACON Business Economic and Community Outreach Network at Salisbury University.

to have more space once it moves into our new Academic Commons building; however, as mentioned previously, we are hoping that we will be able to secure additional operating resources to hire the staff needed to strengthen this successful program.

Salisbury University also was selected as one of 44 institutions nationwide to participate in the Association of American State Colleges and Universities (AASCU) “Reimagining the First-Year of College” program. This is a new project that is designed to ensure success for all students, particularly those who have been underserved by higher education: low-income, first-generation and students of color. This program was developed through the support of the Bill and Melinda Gates Foundation and will feature work group sessions, national meetings, expert mentorship and resources to create a robust collection of integrated strategies and programs to maximize student success for traditionally vulnerable populations.

■ Diversity and Inclusion

In the wake of a national outcry for greater attention to diversity, equity and inclusion in higher education, I provide the General Assembly with information related to SU’s commitment to addressing these issues (Appendix 3). While I recognize that there is much work still to be done, I am hopeful that SU is moving in the right direction as we continue to work with our diverse campus leaders.

I also briefly highlight the increasing diversity of our student population, which has been a significant priority of mine over the past 16 years (Figure 16). Ensuring that our campus is comprised of diverse students, faculty and staff is important so that all members of our campus community have the rich and marketable experience of learning, working and growing alongside individuals from a variety of backgrounds. Our students must be equipped to operate efficiently and successfully in an increasingly diverse world; we must begin that work and education here on our campus.

■ General Education Review

This past year, a work group comprised of faculty members from across the University has been working to update Salisbury University’s General Education curriculum. SU’s General Education program has not been reviewed for several decades, and we are excited about the potential changes that will likely come as a result of this process. SU is committed to ensuring that our graduates are prepared to enter the workforce with important competencies that all students must utilize in our increasing globalized marketplace.

■ STEM (Science, Technology, Engineering, Mathematics)/ Allied Health

As mentioned last year, SU was named to the inaugural list of STEM Jobs Approved Colleges for 2015. We were highlighted for our work in “leading the way in connecting education with high-demand, high-growth STEM occupations.” This past spring, SU graduated its first cohort of students from our Doctor of Nursing Practice (D.N.P.) program, which is filling a critical workforce need on the Lower Eastern Shore and beyond.

SU recently established a pathway for local high school students to access high-quality STEM courses through a specialized dual enrollment agreement with the Worcester County Public School system. This program will allow students

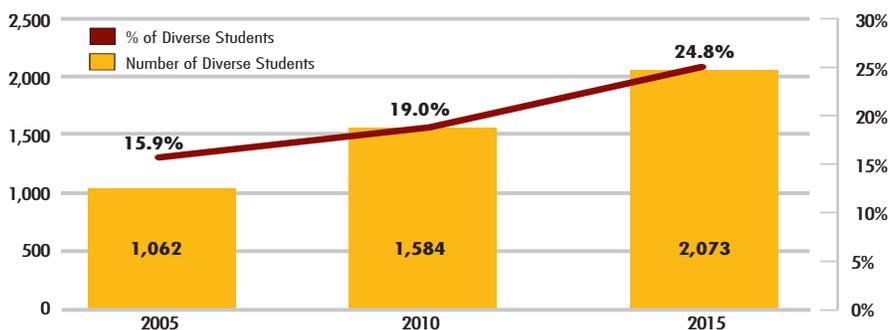
to earn up to 19 credits at SU in Physics, Engineering and Computer Science courses; we hope to expand this opportunity to other local school districts in the future. It is important to note that these are only a few recent examples of the myriad STEM activities happening on SU’s campus (Appendix 4).

■ Teacher Education

Salisbury University is proud of its history as a former State Teachers College. SU continues to graduate Maryland teachers of the highest caliber. Since 2011, 21 SU graduates have been named Teachers of the Year by the counties in which they teach throughout Maryland. SU’s Department of Teacher Education is accredited by the National Council for Accreditation of Teacher Education (NCATE) and the Maryland State Department of Education. Also, SU’s Early Childhood and Elementary Education Program is accredited by the National Association of Education for Young Children (NAEYC).

Additionally, SU’s Provost, Dr. Diane Allen, was named to the Governor’s P-20 Council and the Teacher Education Workgroup because of her innovative work in the elementary and secondary education field. Notably, SU has enrolled its first cohort in our second doctoral program, the Doctor of Education (Ed.D.) in Contemporary Curriculum Theory and Instruction in Literacy, which was developed in response to a critical local workforce need.

Figure 16: No. of Undergraduate Minority Students and Undergraduate Minority as a Percentage of Known Students



Note: Minority students include Black or African-American, American Indian/Alaska Native, Asian, Hispanic, Hawaiian/Pacific Islander and students who report two or more of the above races.

SU Among Hispanic Outlook Top 50

In its annual “Publisher’s Picks,” *The Hispanic Outlook in Higher Education* named SU one of the Top 50 colleges and universities in the U.S., offering “outstanding opportunities to Hispanic students.” Factors applauded include the availability of financial aid and scholarships; tutoring, mentoring and English language programs; multicultural organizations; and other services to help Hispanic students succeed.

■ Graduate Education

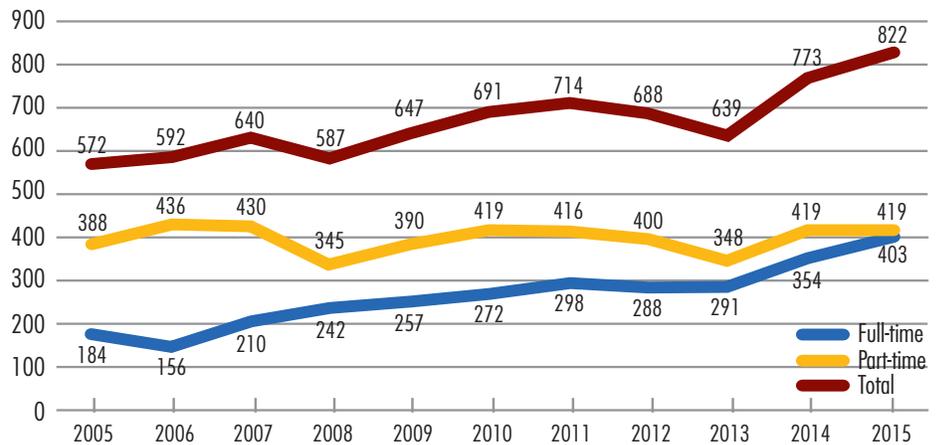
Over the past several years, Salisbury University has made the strategic decision to not only further enhance, but grow our graduate school program offerings. As demonstrated in Figure 17, SU's graduate student enrollment continues to rise. SU began offering a new online Master of Business Administration (M.B.A.) program this past year, which has been met with great interest and demand. Additionally, this spring Salisbury University will graduate its first international cohort from our collaborative University of Maryland University College (UMUC) Master of Social Work (M.S.W.) program in Germany.

Support for Governor Hogan's Budget

Salisbury University, along with our colleagues from across the University System of Maryland, urges your support for Governor Hogan's proposed FY2017 budget. We appreciate the Governor's decision to fund the University System of Maryland's mandatory cost increases, attributed to rising insurance premiums and retirement benefit expenses; this relieves a tremendous burden for institutions like SU. We also are grateful that Governor Hogan included an estimated 2.5 percent merit increase for USM employees, while also providing enhancement funding to increase college completion and student success. Salisbury University will use our \$400,000 portion to fund a transfer scholarship initiative targeted toward Pell-eligible students. We anticipate that this infusion of funds will help us increase our Pell-eligible transfer yield. **While these resources will help SU move the needle on some of our most pressing priorities, we do urge your support for additional General Funds so that we may effectively operate the Academic Commons, which is scheduled to open summer 2016.**

Additionally, Salisbury University joins the other USM institutions in asking the General Assembly to reject the DLS' recommended health deficiency and personnel cost reductions.

Figure 17: 2015 Graduate Headcount by Status



SU's National Rankings

(Rankings as of February 17, 2016)

- *Kiplinger's Personal Finance* magazine's Top 100 "Best Values in Public Colleges" for 2016 (February 2016 issue) – 9th consecutive year. Also, *Kiplinger's* "24 Best College Values Under \$30,000 a Year" in 2015.
- *The Economist's* "First-Ever College Rankings" (October 2015). SU was in the top 15 percent (157th out of 1,275) of four-year U.S. colleges on the inaugural list. Measuring "economic value" of institutions, it compared actual alumni earnings to expected earnings.
- *The Hispanic Outlook in Higher Education's* "Publisher's Picks" as one of the top 50 colleges in the U.S. offering "outstanding opportunities to Hispanic students."
- *U.S. News & World Report's Best Colleges* for 2015-2016 (September 2015 issue) – 19th consecutive year. SU is among the Best Regional Universities in the North. SU also is on the "A-plus Schools for B Students" list. For three consecutive years, SU also was spotlighted on the *U.S. News* website as a university that operates most efficiently.
- *The Princeton Review's The Best 380 Colleges* and *The Best Northeastern Colleges* for 2015-2016 (August 2015 editions) – 17th consecutive year.
- *The Princeton Review's Guide to 353 Green Colleges: 2015 Edition* (April 2015) – 6th consecutive year. Published with the U.S. Green Building Council.
- *Washington Monthly* magazine's "America's Best Bang-For-The-Buck Colleges" (September/October 2015 edition) – 3rd consecutive year.
- *Forbes* magazine's "America's Top Colleges" for 2015 (August 2015 edition) – 2nd consecutive year.
- *Money* magazine's "The Best Colleges for Your Money" for 2015 (August 2015 edition) – 2nd consecutive year.
- *Consumers Digest's* "Top 100 College Values" in June 2015.
- Named one of the "50 Most Beautiful College Arboretums" by Best College Reviews.com and the "50 Most Amazing University Botanical Gardens and Arboretums in the U.S." by Best Colleges Online.org, both in 2015.
- A *University Business* magazine "Model of Efficiency" for spring 2014. Applauded for innovative approaches to streamlining operations, SU was the only Maryland campus honored and one of only 8 recognized nationwide. SU also honored in spring 2012.



Conclusion

It is clear that Salisbury University is a leader in efficient and effective higher education resource management. As the State looks to boost college completion rates while maximizing resources, it is important to recognize and reward the achievements of those institutions that consistently show strong results while managing wisely the State's limited resources. As we look for ways to expand access for Marylanders and improve economic development throughout the region, Salisbury University needs additional resources to grow. This will enable Maryland to better prepare the workforce of the future while ensuring the State's strong and growing economy.

Again, thank you for your continued support and for your service to the Great State of Maryland.

Janet Dudley-Eshbach

President Janet Dudley-Eshbach, Ph.D.

Salisbury
UNIVERSITY

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Salisbury University is a proud member of the University System of Maryland.



ECONOMIC IMPACT OF
On the Eastern Shore of Maryland



Study Conducted by:



February

2016

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\$480.5
Million
Annual
Economic Impact

3,287
Jobs
Supported annually

\$79.5
Million
Annual
Fiscal Impact

ANNUAL IMPACT FROM:

	Economic Impact	Employment Impact	Fiscal Impact
Operations	\$240.6 million	2,475 jobs	\$46.5 million
Construction	\$33.5 million	106 jobs	\$3.03 million
Student Spending Locally	\$90 million	226 jobs	\$12.6 million
Visitor Spending Locally	\$4.4 million	130 jobs	\$.55 million
Educated Workforce, Outreach, & Entrepreneurship	\$112 million	350 jobs	\$16.8 million

Executive Summary

Salisbury University generates \$480.5 million annually in local economic impact in the surrounding community. In addition, the University, annually, generates \$79.48 million in fiscal impact and supports over 3,200 jobs. Fiscal impact is the federal, state, and local taxes generated because of the \$480.5 million in economic activity in the region. These impacts are derived from the following activity categories:

- **Operations (annual local impacts)**
 - Economic - \$ 240.6 million
 - Employment - 2,475 jobs supported
 - Fiscal - \$ 46.5 million

- **Construction (annual local impacts)**
 - Economic - \$ 33.5 million annually (\$ 535.7 million over the past 16 years)
 - Employment - 106 jobs supported annually (1,700 over the past 16 years)
 - Fiscal - \$ 3.03 million annually (\$ 48.46 million over the past 16 years)

- **Student spending (annual local impacts)**
 - Economic - \$ 90 million (\$ 38.6M net new impact)
 - Employment - 226 jobs supported (97.2 net new jobs)
 - Fiscal - \$ 12.6 million (\$ 5.4M net new impact)

- **Visitors (annual local impacts)**
 - Economic - \$ 4.4 million (\$ 35K per 100 visitors)
 - Employment - 130 jobs supported
 - Fiscal - \$ 545,000

- **Educated Workforce, Outreach, and Entrepreneurship (annual local impacts)**
 - Economic - \$ 112 million impact
 - Employment -350 jobs supported
 - Fiscal - \$16.8 million impact

Total Annual Local Impact of \$480.5 Million, Supporting 3,287 jobs

Study Overview

All estimates are provided on an annual basis unless otherwise noted. The geographic area of study is the Eastern Shore of Maryland (also referred to as the region) which includes: Caroline, Cecil, Dorchester, Kent, Queen Anne’s, Somerset, Talbot, Wicomico, and Worcester Counties. Unless otherwise noted, all estimates are based on actual FY ’15 data and AY ’15 for student data.

Economic and Employment Impact of Operations

The annual operating budget of Salisbury University is substantial at over \$165.2 million in FY 15. The significance of these budget numbers increases as the multiplier effect is taken into consideration. Many individuals and businesses receive funds from the University as employees and vendors. These funds are then re-spent in the local economy on goods and services.

Table 1. Economic and Employment Impact of Salisbury University’s Operating Budget		
	Economic (\$ millions)	Employment
Direct Effect	157.1	1,841.0
Indirect Effect	2.6	16.8
Induced Effect	80.9	617.8
Total Effect	240.6	2,475.6

Table 1 shows the estimated annual economic and employment impact of Salisbury University’s operating budget for FY 15. After accounting for leakage, the direct economic effect is approximately \$157.1 million. This spending creates an indirect effect of approximately \$2.6 million and an induced effect of approximately \$80.9 million. Thus, the total

estimated economic effect from operations is \$240.6 million on the Eastern Shore on Maryland. In other words, each dollar spent in operational monies by Salisbury University results in total economic activity of \$1.46 in the region.

Salisbury University directly employs over 1,800 people, including full-time and part-time positions. Through its operations, the University supports an additional 16.8 indirect jobs and 617.8 induced jobs in the region (including both full-time and part-time jobs).

Spending by the University, and by the students, results in indirect and direct expenditures involving taxable transactions. The total fiscal impact of the economic activities relating to the operation of the University is approximately \$46.5 million which includes \$34.9 million in federal taxes and \$11.6 million in state and local taxes.

The top 10 industries impacted by Salisbury University’s operational spending in the region by output in descending order are: real estate, owner-occupied dwellings, wholesale trade, hospitals, electric power transmission and distribution, full-service restaurants, wired telecommunications carriers, limited-service restaurants, offices of physicians, and natural gas distribution.

Economic and Employment Impact of Capital Spending

Salisbury University also makes substantial capital expenditures that have impacts within the region. The level of capital expenditures can vary significantly from year to year. Therefore, rather than examining the impact for one given year, the impact of the average capital expenditures is examined here for projects completed over the tenure of the current University President, Dr. Janet Dudley-Eshbach, which extends from 2000 to the present. Over this period a number of significant capital projects have been undertaken including the construction of the Scarborough Leadership Center, Henson Science Hall, the Teacher Education and Technology Center (TETC), the Wayne Street Parking Garage, Sea Gull Square, Perdue Hall, Sea Gull Stadium, the Henson Medical Simulation Center, and the Guerrieri Academic Commons.

During this time period, a total of \$356 million was invested in the above capital projects resulting in a total economic impact of approximately \$535.7 million.

When averaged over the 16-year period being examined, the annual economic impact is approximately \$33.5 million. Additionally, approximately 1,700 local jobs (full-time and part-



time) were supported during the construction of these projects. The fiscal impact of these capital projects totals approximately \$48.46 million which includes approximately \$29.71 million in federal taxes and \$18.75 million in state and local taxes. However, it is important to note that impacts from any given capital project occurs during the time of the project.

The funding for capital projects comes from a variety of sources including federal and state sources. It is likely that without Salisbury University, the funds that have been invested in capital projects from federal and state sources would be allocated elsewhere in the state, potentially outside of the Eastern Shore.

Student Spending

In fall 2015, over 5,500 students lived in off-campus housing, of which approximately 1,800 were estimated to be commuter students. It is assumed that students living off-campus incur similar living expenses as those on campus. Therefore, based on the cost of attendance estimates provided by Salisbury University, students are assumed to spend approximately \$6,150 in rent, \$4,470 in food, and \$2,638 in transportation and personal expenses during the 9-month academic year. These estimates are conservative given the rental market off-campus and the fact that many students stay within the region



during the summer months. To avoid double counting, tuition and fees expenses are not included here as these expenditures are already captured in the operational budget of the University. Furthermore, students who reside on campus are estimated, conservatively, to spend an

average of \$7 off campus per day. total of 3,160 students lived on campus in fall 2015. This includes students living on the main campus and those residing in Sea Gull Square and University Park.

The total economic activity attributable to student spending is estimated to be around \$90 million, supporting 226 jobs, and generating a fiscal impact of \$12.6 million. However, some of this economic activity would have already been present (in the case of commuter students) or has already been captured in other components of this study.

To estimate the net new local impact of spending by Salisbury University students, the number of students who reside off-campus who are not commuters is multiplied by the annual expenses identified above. The number of on-campus students is multiplied by the estimated average daily off-campus spending by the number of days in the school year. These totals are used as inputs in an IMPLAN model.

The estimated annual local economic impact from off-campus, non-commuter students is approximately \$38.6 million. The annual local employment impact from this local spending is approximately 97.2 and

the fiscal impact totals approximately \$5.4 million including \$2.22 million in federal taxes and \$3.18 million in state and local taxes.

Given the rural nature of the Eastern Shore, the majority of the economic activity generated by student spending in the local economy can be attributed directly to the presence of the University.

Approximately 70.2% of students (6,087) come to Salisbury University from primary residences outside of the Eastern Shore. This means that a majority of student spending is considered “new money” or money that would not have otherwise been spent within the region. On the other hand, if Salisbury University was not present on the Eastern Shore, a small portion of students may have attended one of the other two universities present in the region, Washington College and the University of Maryland Eastern Shore. However, given their relatively low enrollment figures (approximately 1,500 and 3,500 respectively), at best a small percentage of students from the Eastern Shore would likely stay within the region for college if Salisbury University was not present, the majority would have to leave the Eastern Shore to attend college elsewhere.

Economic Impact of Visitors

Salisbury University hosts a number of events that bring out-of-town visitors to the region for one or more days. Some of these events include Homecoming and Family Weekend, sporting events, Sea Gull Century, the Ratcliffe Shore Hatchery Entrepreneurship Competition, and cultural events among many others.

Each event at the University has a unique visitor profile. Some events may bring as many as 8,000 individuals to the area, such as Sea Gull Century, while others may bring several hundred or a few thousand. Rather than assessing each individual event, this analysis provides a general impact estimate that can be applied to individual events. The inputs for this estimate assuming an average hotel rate of \$120 per night (double occupancy) and daily spending on food of \$45 (the State of Maryland per diem reimbursement rate). It is estimated that, for every 100 out-of-town overnight visitors that stay overnight for 2 nights, there is an economic impact of approximately \$32,000 in the local economy.

This estimate is decidedly conservative as it does not capture any retail, transportation spending, or other spending categories beyond food and lodging. When the estimated spending in these additional categories is added to the estimate above, the “Impact per 100 Visitors” figure increases to approximately \$35,000. Using these numbers as a starting point, we estimate that the total impact of

visitors that come to the area for reasons directly related to Salisbury University (athletic events, open houses, Homecoming and Family Weekend, cultural events, non-credit offerings, family visits, etc.) is approximately \$4.4 million with a fiscal impact of over \$545,000. In addition, these activities support over 130 jobs in the local economy.

Impact of a Better Educated Workforce

Salisbury University contributes to a better educated workforce within the region and beyond. In the last academic year, 1,935 undergraduate students graduated from SU along with 270 graduate students. The contributions of Salisbury University graduates are critically important to the local economy.

Higher education levels are associated with greater pay in the workforce. On the Eastern Shore, those with a bachelor's degree earn an annual income of approximately \$47,887¹ on average. Individuals who attain a graduate degree earn an annual income of approximately \$62,720¹. This compares to an annual income of approximately \$29,133¹ on average for those who earn a high school diploma but do not go on to complete a college degree.

These incremental annual earnings compound over the course of the individual's work life. The estimated present value (PV) of the incremental lifetime earnings of those who earned undergraduate and graduate degrees from Salisbury University in AY 15 are approximately \$1.1 billion. Assuming just 10% of graduates stay within the region after graduation, they will

Annually, graduates of Salisbury University that stay in the region are expected to earn approximately \$104.8 million in additional lifetime earnings, resulting in a lifetime economic impact of \$94.0 million per graduating class.



bring with them an estimated \$104.8 million in additional earnings over their lifetime. These estimates assume that the incremental earnings hold over the work life of the individual (estimated as the traditional age of graduation through the retirement, age 22 to age 67). The present value of the additional annual earnings is calculated using a discount rate of 3.34%, the annual rate on a 30-year constant maturity *Treasury Bond* in 2014².

¹ U.S. Census, American Community Survey 2011-2013 3-Year Estimates

These additional earnings generate further economic impact in the local economy through higher levels of spending on goods and services. The economic impact of these additional lifetime earnings within the region are approximately \$94 million per graduating class after accounting for leakage, again assuming conservatively that approximately 10% of Salisbury University graduates remain on the Eastern Shore for work. The fiscal impact of these additional earnings includes approximately \$14.1 million in federal, state, and local taxes.

Impact of Local Business Development

Salisbury University has a variety of entrepreneurship programs and a number of graduates who have gone to on to start their own businesses upon graduation. The Shore Hatchery Entrepreneurship Competition, established by a \$1 million gift from the Philip E. and Carole R. Ratcliffe Foundation announced to SU's Franklin P. Perdue School of Business, is one such program that rewards individuals for their entrepreneurial efforts in the creation and growth of businesses with the potential of positively impacting regional employment within three years. Shore Hatchery has completed its first two and half years of competitions awarding \$510,000 thus far. Of the 22 winning businesses, eight are (or will be) located within the study region. These eight businesses have received \$170,000 in capital.

Specifically for students, there is also the annual Perdue Entrepreneurship Competitions which provide seed funds to entrepreneurial students for their business concepts. In spring 2014, these competitions resulted in a total of approximately \$62,000 in prize earnings. In spring 2015, it was \$112,000.

In addition, the Small Business Development Center, the Business, Economic, and Community Outreach Network (BEACON), and the Eastern Shore Regional G.I.S. Cooperative (ESRGC), and other outreach entities operating at Salisbury University make major contributions to the region's economy.

In combination, these outreach units and the various entrepreneurial activities described above are estimated to have an \$18 million impact, supporting over 350 jobs. This impact includes \$2.7 million in federal, state, and local taxes.

² Federal Reserve System Historical Data, www.federalreserve.gov

Study Methodology

The economic impact of Salisbury University was estimated using IMPLAN (Impact Analysis for PLANing), an economic impact assessment software system originally developed at the University of Minnesota and the U.S. Forest Service. The IMPLAN model includes all economic effects when calculating total output/employment (i.e. this includes “direct” plus “indirect” plus “induced” [ripple effect] impacts). In IO models, the “jobs supported” estimates are the number of jobs that are needed to produce the current level of local output at the average productivity levels of workers in their respective industries. The Social Accounting Matrices in IMPLAN provide the multipliers of the indirect and induced economic and employment impacts. The model is based on regional data from 2013 inflated to 2015 figures.

The direct economic impact includes the initial spending by Salisbury University to its employees, through salaries, or to businesses selling directly to the school system. The indirect economic impact accounts for the additional spending and jobs supported in the local economy from the spending to local suppliers. These local suppliers pay salaries to their employees from the money received from contracts with the University. Additionally, they contract with other local firms for goods and services.

The induced economic impact accounts for the additional spending and jobs supported in the local economy from consumer retail spending associated with the direct and indirect effects. For example, employees of Salisbury University and those of the firms contracting with Salisbury University will spend significant portion of their salaries in the local economy. This spending supports additional jobs at local firms.

At each level of impact, there is “leakage.” Leakage accounts for the spending that goes to employees and vendors outside of the region. Once this money exits the region, it is not available for re-spending or recirculating within the region.

Model Inputs and Data Sources

Primary model inputs include actual fiscal expenditures provided by Salisbury University’s Administration and Finance Office. Student spending impacts were estimated using data from the University Analysis, Reporting, and Assessment Office. Data from the United States Census Bureau and the U.S. Bureau of Labor Statistics used to calculate the student spending and incremental earnings estimates.

Glossary

Direct Effects- The set of expenditures applied to the predictive model (i.e., I/O multipliers) for impact analysis.

Indirect Effects- The impact of local industries buying goods and services from other local industries.

Induced Effects- The response by an economy to an initial change (direct effect) that occurs through re-spending of income received by component of value added.

Total Economic Impact- the sum of direct effects, indirect effects, and induced effects.

Employment Impact- full-time and part-time jobs supported in the study region as a result of the economic activity.

Leakage- spending that leaves the study region.

Multiplier Effect- a numeric way of describing the secondary (indirect and induced) impacts stemming from the direct economic activity.

Present Value- the current worth (in 2015 dollars) of a future stream of cash flows.

Output- Output represents the value of industry production. In IMPLAN these are annual production estimates for the year of the data set and are in producer prices. For manufacturers this would be sales plus/minus change in inventory. For service sectors production = sales. For retail and wholesale trade, output = gross margin and not gross sales³.

³ IMPLAN Glossary, www.implan.com

Entrepreneurship @ Salisbury University

Salisbury
UNIVERSITY

In 2015, Salisbury University celebrated its inaugural Entrepreneurship Week highlighted by a series of business-funding competitions hosted by the Franklin P. Perdue School of Business.

The first event of the week was the fourth round of SU's Philip E. and Carole R. Ratcliffe Shore Hatchery program. In 2013, the Philip E. and Carole R. Ratcliffe Foundation announced a five-year, \$1 million gift to the Perdue School of Business (the largest in the foundation's history) to establish the Shore Hatchery. Its goal is to reward individuals for their entrepreneurial efforts in the creation and growth of businesses with the potential of positively impacting regional employment within three years.

The week continued with SU's annual Entrepreneurship Competitions. Open to

students across all majors, the day features three levels of competition, with successful contestants progressing for larger prize winnings. The competitions start with an Invest in My Idea poster session that allows all participants to visually share their business ideas for awards and prizes. Fifteen winners move on to the Gull Cage. This *Shark Tank*-style competition allows one minute for delivering verbal pitches and four minutes for answering judges' questions. These top four finalists move on to the top prize, the annual Bernstein Award, where they have 20 minutes to present and answer questions about their full business plans.

Capping the week was a casting call for the hit ABC-TV reality show *Shark Tank*. For the second year, more than 200 entrepreneurs from throughout the East

Coast descended upon SU to audition, during which entrepreneurs pitched their products and business ideas during recorded sessions.

This week is just the latest evolution in SU's long history of supporting entrepreneurship. Nearly 30 years ago, the Bernstein Achievement Award was launched by local entrepreneur and SU alumnus Richard Bernstein. He created the competition to recognize students who develop original, well-researched and potentially successful proposals for a business startup or for the transformation of an existing business. Through this award and the numerous other competitions and programs, Salisbury University continues to encourage young entrepreneurs to move forward with their visions.

Entrepreneurship Competitions

1 DAY
3 LEVELS OF COMPETITION
\$100,000 IN PRIZES

INVEST IN MY IDEA POSTER COMPETITION

29: business teams

15: winners

GULL CAGE COMPETITION

5-minute: presentation

\$4,000: first place

\$3,000: second place

\$2,000: third place

\$1,000: fourth place

BERNSTEIN AWARD COMPETITION

1987: year competition began

4: competitors

\$10,000: grand prize

2015 WINNER

5 POP: Jenna DeLetto's product is a football-training device programmed to signal players when they are carrying the ball improperly. Developed with her grandfather, the football uses patented technology to sound an alarm when players carrying it do not correctly use the recommended five points of pressure (or POP): fingers, palm, forearm, bicep and torso.

\$27,000: DeLetto's total Entrepreneurship Competitions winnings

\$30,000-\$40,000: Estimated production costs to produce up to seven prototype devices

Philip E. and Carole R. Ratcliffe Foundation Shore Hatchery

\$1 MILLION GIFT
5-YEAR PROGRAM
\$200,000 AWARDED ANNUALLY

SPRING 2015 AWARDS

\$35,000: PaverGuide – Producing a lightweight, low-cost pervious paving system

\$25,000: NUVU – A nightlife guide and social interaction app, providing real-time analytics and advertising opportunities

\$25,000: Kitchology – An app providing substitution suggestions in recipes for diners seeking to lose weight or managing dietary restrictions

\$20,000: Oasis Marinas – An upscale marina management company, which won \$30,000 in last fall's Shore Hatchery

\$5,000: Gold Leaf Academy – An accredited child care program and private school serving children ages 6 weeks to 4 years

\$5,000: Kanga Trash and Energy Systems – Producing under-seat garbage cans for stadiums and arenas

\$5,000: Operation Precision Systems, LLC – Developing a cloud-based drinking water quality monitoring and management service

\$5,000: IPPS Mentoring Program – Providing mentoring services at the Wicomico County Detention Center in hopes of keeping inmates from returning

To view the entrepreneurship presentation, visit:
www.salisbury.edu/video2015

FRANKLIN P. PERDUE
SCHOOL OF
Business

www.salisbury.edu

SU is an Equal Opportunity/AA/Title IX university and provides reasonable accommodation given sufficient notice to the University office or staff sponsoring the event or program.

Achieving Inclusive Excellence



December 1, 2015

Since its founding in 1925, Salisbury University has traditionally attracted primarily white students, faculty and staff. Recognizing a need to increase students' opportunities to gain competency in learning about and working with diverse cultures and expanding access to college, SU President Janet Dudley-Eshbach launched a cultural diversity initiative within the first year of her arrival on campus in 2000. In an early letter to the campus, President Dudley-Eshbach stated: "What needs to happen on this campus is no less than a transformation in terms of inclusiveness, campus climate, and dialogue within our SU community," and she later announced the creation of an Office of Diversity.



When President Dudley-Eshbach arrived on our campus, Salisbury University was the least racially diverse of the "traditionally white institutions" within the University System of Maryland. During her tenure, President Dudley-Eshbach has provided transformational leadership, implementing a strategic vision that has resulted in the institution's growth in size and reputation. Part of her vision included a more diverse, international and inclusive campus – and many initiatives were implemented to support these goals:

Looking Back: Salisbury University's Commitment to Diversity

-
- 2001** President Janet Dudley-Eshbach launches Presidential Diversity Initiative.
-
- 2002** Position of Director of International Education is created.
-
- 2004** Director position and Office of Diversity are created. The office is organizationally housed in the Division of Academic Affairs, reporting directly to the Provost.
-
- 2007** A five-year pilot study of an SAT/ACT optional admissions policy is conceived and implemented. The test-optional policy aims to broaden access for high-achieving students who have been historically underrepresented in higher education.
- The annual President's Diversity Award program is established to recognize the achievements and service of members of the campus community who make extraordinary contributions to promote the appreciation and understanding of cultural diversity.
-
- 2008** The Multiethnic Student Services office is renamed Multicultural Student Services to reflect the increasing diversity of cultural groups on the SU campus.
-
- 2009** President Dudley-Eshbach, in consultation with a diverse group of students, faculty and staff, further emphasizes the Office of Diversity, placing it as a function of the President's Office.
- The University Governance Consortium and its Cultural Diversity Committee replace the former SU Assembly Committee on Multi-Ethnic Concerns.
- The International Education Strategic Plan (2009-2013) is established. The international strategic plan is aligned and embedded throughout SU's mission and institutional Strategic Plan.
- The University Strategic Plan for 2009-2013 is released and demonstrates a continuing strong commitment to diversity.
- The first Hispanic Student Initiative is developed.
- SU unveils on campus a bronze sculpture of Eastern Shore native Harriett Tubman.
-
- 2010** SU is awarded a \$1.2 million TRIO grant by the U.S. Department of Education to help enhance student retention initiatives on campus as part of the University's Achieve Student Support Services program.
- The Salisbury University English Language Institute (ELI) was created as a major strategic initiative to stem the steady decline in the percentage of non-immigrant international students in the SU student population over the previous decade.
-
- 2011** Following a five-year pilot study, the University System of Maryland Board of Regents approves continuation of SU's test-optional policy for high-achieving students.
- The *Hispanic Outlook in Higher Education Magazine* features President Dudley-Eshbach and highlights her commitment to a diverse campus.
-
- 2013** The Office of Institutional Equity: Fair Practices, Diversity and Inclusion is created as an enhancement to the Office of Diversity.
- The Safe Space program is piloted. It aims to reduce the often unwelcoming and even hostile environments in which LGBTQIA people navigate; it builds upon the Horizons program, the original campus initiative promoting awareness of LGBT issues on campus.
-
- 2014** The Latino Student Initiative highlights accomplishments in five years since the Hispanic Initiative launch. Safe Space program is fully implemented at SU.
-
- 2015** A renewed Cultural Diversity and Inclusion Committee of the Consortium is assembled. Initial initiatives include the development of a Diversity Statement and the creation of an Inventory of Diversity Initiatives.
- Campus Safe Space seating area is dedicated to Dr. Polly Stewart, founder of SU's Horizons program.
-

Where We Are Today: Diversity by the Numbers

Facts and figures as of December 1, 2015

STUDENTS		FACULTY	
<p>8,671 TOTAL STUDENTS</p>	<p>STUDENTS FROM 68 COUNTRIES</p>	<p>BETWEEN 2005 AND 2015: GROWTH IN SU FACULTY</p> <p>22.6% ALL FACULTY</p> <p>89.7% MINORITY FACULTY</p>	<p>IN FALL 2015: PERCENT OF SU'S TENURED/ TENURE-TRACK FACULTY FROM MINORITY BACKGROUNDS*</p> <p>17.1% ALL FACULTY</p>
<p>FALL 2015: PERCENT OF SU STUDENTS FROM MINORITY RACE OR ETHNICITY CATEGORIES*</p> <p>27.5% UNDERGRADUATE STUDENTS</p> <p>26.7% UNDERGRADUATE AND GRADUATE STUDENTS</p>	<p>BETWEEN 2005 AND 2015: GROWTH IN SU UNDERGRADUATE ENROLLMENT</p> <p>21.9% ALL STUDENTS</p> <p>103.1% MINORITY STUDENTS</p>	<p>BETWEEN 2005 AND 2015: GROWTH IN SU NON-TENURE-TRACK FACULTY</p> <p>37.1% ALL FACULTY</p> <p>190.9% MINORITY FACULTY</p>	
<p>BETWEEN 2005 AND 2015: GROWTH IN SU GRADUATE ENROLLMENT</p> <p>43.7% ALL STUDENTS</p> <p>89.9% MINORITY STUDENTS</p>	<p>FALL 2015: TOTAL STUDENT POPULATION</p> <p>59% FEMALE</p> <p>41% MALE</p>	EXCELLENCE & VALUE	
		<p>AVERAGE INCOMING GPA</p> <p>3.69</p>	<p>MID 50% SAT RANGE (3-PART): 1640-1810 (MATH + READING + WRITING)</p>
<p>AVERAGE (3-PART) SAT: 1730 (MATH + READING + WRITING)</p>		<p>DURING PRESIDENT DUDLEY-ESHBACH'S TENURE, SU HAS CONSISTENTLY RANKED AMONG:</p>	
<p>IN FALL 2015: PERCENT OF SU STAFF MEMBERS FROM MINORITY BACKGROUNDS*</p> <p>36.3% ALL STAFF</p>		<p>BETWEEN 2005 AND 2015: GROWTH IN SU STAFF</p> <p>24.1% ALL STAFF</p> <p>23.8% MINORITY STAFF</p>	
<p>IN FALL 2015: PERCENT OF SU STAFF MEMBERS FROM MINORITY BACKGROUNDS*</p> <p>36.3% ALL STAFF</p>		<p>U.S. NEWS & WORLD REPORT'S BEST COLLEGES (19 CONSECUTIVE YEARS)</p> <p>THE PRINCETON REVIEW'S BEST COLLEGES (17 CONSECUTIVE YEARS)</p> <p>KIPLINGER'S PERSONAL FINANCE TOP 100 BEST VALUES IN PUBLIC COLLEGES (7 CONSECUTIVE YEARS)</p>	
<p>Diversity and inclusion are core values of Salisbury University. A diverse and inclusive campus community brings irreplaceable value to our educational experience and work environment, and strengthens us all. Diversity encompasses more dimensions than just the legally protected categories. All people have talent and potential that are spread across communities and groups, locally and globally. Inclusion means creating an environment of respect, connection and involvement among people with different experiences and perspectives. We strive to create a truly diverse and inclusive environment where the richness of ideas, backgrounds and perspectives of our community is harnessed to create value for our institution, today and in the future.</p>		<p>FULL-TIME FACULTY 416</p> <p>95% OF TENURED/TENURE-TRACK FACULTY HAS DOCTORAL OR TERMINAL DEGREE</p>	

* ■ AFRICAN AMERICAN/BLACK ■ AMERICAN INDIAN OR ALASKA NATIVE ■ ASIAN ■ HISPANIC/LATINO ■ WHITE ■ NATIVE HAWAIIAN OR OTHER PACIFIC ISLANDER ■ TWO OR MORE RACES ■ NONRESIDENT ALIEN

Science, Technology, Engineering & Mathematics (STEM) @ SU

Salisbury
UNIVERSITY

PROGRAMS

STEM MAJORS

- Biology
- Chemistry
- Computer Science
- Earth Science
- Geography
- Mathematics
- Physics
 - Engineering Transfer

GRADUATE PROGRAMS

- Applied Biology (M.S.)
- GIS Management (M.S.)
- Mathematics Education (M.S.)
- Teaching (M.A.T.)

STEM@SU

Salisbury University offers extraordinary opportunities for students interested in science, technology, engineering and mathematics (STEM). The University provides engaging and rigorous STEM majors to students seeking careers in aerospace, biotechnology, bioinformatics, biomedicine, computational science, cybersecurity, environmental science, green technologies, geosciences, mechanical engineering, science and mathematics teaching, technology entrepreneurship, and many other fields. Given that graduates of STEM disciplines are critically needed to keep the United States labor force innovative and competitive, our goal is to produce highly skilled and knowledgeable STEM majors and outstanding educators for science and math teaching.



Salisbury University STEM, Biology and Nursing Living Learning Communities

Why STEM?

- Maryland is in a region (DC/MD/VA/WV) with the second largest concentration of STEM workers in the country and has the fourth highest concentration of STEM workers in all states.
- Workforce projections by the U.S. Department of Labor show that 8 of the 10 fastest growing occupations require significant science or mathematics training to successfully compete for a job.
- According to a recent study, graduates with engineering and science majors tend to earn significantly more than graduates with other college majors. Additionally, seven of the top 10 majors with the lowest unemployment rates are STEM-related.

Job growth in science and tech-related fields is expected to be nearly double that in non-STEM occupations.

STEM Programs

■ Biological Sciences:

The curriculum focuses on the development of knowledge and skills that are important for biologists in the 21st century and includes a strong background within the discipline, competency in related sciences and an in-depth knowledge of modern biological concepts and techniques. Graduates often pursue graduate school or professional programs in health-related fields or directly enter employment as teachers, environmental analysts, researchers, health-care workers and many other fields.

- **Chemistry:** Several tracks lead to a B.S. in chemistry, including two that are certified by the American Chemical Society (ACS). These tracks foster development and expression of rational thought and help prepare students for admission to Ph.D. programs in chemistry, related professional fields (such as medicine and pharmacy), and positions in the chemical and related industries.

CONTACT INFORMATION

For more information, contact:
STEM@salisbury.edu

■ Computer Science:

Prepares students to become outstanding computer science professionals with an emphasis on software development. Cooperative learning and team experiences are incorporated throughout the program to prepare students for environments they will encounter after graduation.

Continued on reverse



Dominique Kunciw
2013 SU graduate (B.S., Chemistry) and
recipient of a 2013 Gates Cambridge Scholarship

www.salisbury.edu/henson/stem

SALISBURY



■ **Earth Science:** Earth science includes the study of the solid earth (the lithosphere), the atmosphere, the hydrosphere and the biosphere. Earth scientists use tools from multiple disciplines to understand how earth systems work. Many earth scientists are involved in finding solutions for waste disposal, providing clean energy, promoting sustainability and coping with hazards such as earthquakes, flooding and erosion. Others study the human influence upon the earth and provide the information needed to establish policies for resource management, environmental protection, and public health safety and welfare. Importantly, earth science students may have careers in secondary science education.

■ **Engineering:** The transfer engineering program is a cooperative program in which the student attends SU for three years and a cooperating engineering school for two years. Upon successful completion of degree requirements, the student is awarded a baccalaureate degree from SU as well as an appropriate engineering degree. Physics students may apply to any Accreditation Board of Engineering and Technology-accredited school; and chemistry students may apply to the chemical engineering

program of University of Maryland College Park.

■ **Geography:** The geography major emphasizes geographic concepts, techniques, skills and their application to the solution of environmental, land use and public planning problems, with tracks in atmospheric science, environmental/land-use planning, geographic information science, human geography, physical geography and general geography. An overwhelming majority of the program's graduates obtain jobs directly related to their degree; many have also gone on to graduate school in geography.

■ **Mathematics:** Majors begin their study with a core of courses in pure mathematics, applied mathematics, computer science and statistics. There are a variety of options including a B.S. in mathematics; a B.S. in mathematics with a concentration in statistics, computer science or actuarial science; and a B.S. in mathematics with secondary education certification. Graduates have a wide variety of fields in industry, government and education; employers of recent graduates include Lockheed Martin, the National Security Agency, the Weather Channel and the Census Bureau.

STEM ACTIVITIES

- Center for Applied Mathematics and Science (CAMS)
- Internships
- Science Camp
- STEM Living-Learning Communities (LLCs)
- Supplemental Instruction (SI)
- Teaching Experiences
- Undergraduate Research
- Math and Science Competitions
- Coding Contests

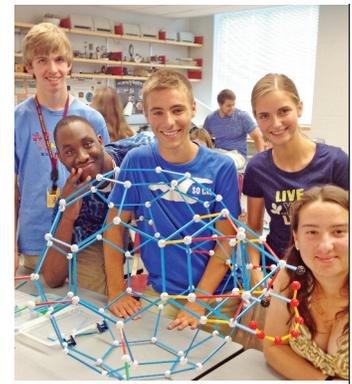
■ **Physics:** Students can pursue a multi-track program of study that provides flexibility to pursue a challenging curriculum. A major in physics prepares students for careers in a variety of high-technology fields, teaching and graduate studies in physics, engineering, medicine, and other fields. Students can complete the physics major in one of five ways: engineering physics track, general physics track, microelectronics track, secondary education track or transfer engineering program.

Research Opportunities

Undergraduate research opportunities connect what is learned in the classroom to the discovery process and allow the student to experience first-hand the practical applications of current methods and technologies. With close faculty mentoring during the research experience, students gain the skills necessary to organize and communicate experimental results and become successful practitioners of scientific research. SU offers semester activities as well as funded summer research programs for undergraduates.

STEM Jobs Approved Campus

In 2015 and 2016, SU received an Approved STEM Jobs Colleges designation in recognition of the programs and support SU provides STEM majors.



STEM Scholarships

STEM scholarships are available on a competitive basis for first-year students entering SU each fall semester. Eligibility is determined by high school GPA, SAT/ACT scores and other metrics, and invitations are typically sent to students in January. STEM majors include: biology, biology/environmental science dual degree, chemistry, computer science, earth science, geography, information systems (Perdue School), mathematics, physics and physics/engineering transfer. STEM scholarships are renewable provided that students remain in a STEM major, meet minimum GPA requirements and are making adequate progress on their programs of study. These scholarships can be awarded in addition to other merit scholarships.

Bridges for SUCCESS

In 2010, SU was awarded a \$996,303 STEM Talent Expansion Program (STEP) grant from the National Science Foundation. Through the grant, the Bridges for SUCCESS (SU's Connections to Careers for Every STEM Student) program was created.

The goal of the program is to increase the total number of graduates in selected STEM disciplines (chemistry, physics, mathematics, computer science and earth science). After just five years, Salisbury University has nearly doubled the number of graduates in these majors.

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