How JMU Has Changed: Facilities and Finance

Dr. Frank Doherty, JMU's Director of Institutional Research, will be retiring in June 2018 after 31 years at JMU in the same office. He has witnessed enormous changes during his tenure and has overseen the collection and reporting of data to the university community, the federal government and the Commonwealth of Virginia. This Research Note, and one more to follow, will summarize many of these changes. The first two notes, "How JMU Has Changed – Students," and "How JMU Has Changed: Faculty, Staff and Administrators," are available on OIR's website. This current note focuses on the infrastructure (facilities) and financial changes since 1987. It will be followed by a Research Note on changes in the JMU educational experience. The data for these notes are drawn from official reports and data compiled by OIR since the early 1970s. Where possible, we attempt to use the data from 1987-88, 2002-03 (the 15th year of these data), 2016-17, and occasionally 2017-18. It is our hope that you will find these notes to be informative and useful.

Background

In the first two Research Notes, we described how JMU's students, faculty, staff and administrators have changed in the last 30 years. In 1987, JMU was a mid-sized (10,000+) institution that reflected its emergence as a liberal arts, business, and teacher-education institution. In 1987-88, the top three majors were Communication Arts, Marketing and Accounting. Since 1987, JMU has more than doubled in size to nearly 22,000 students while the range of disciplines offered expanded greatly. By 2017, the top three majors were Health Sciences, Communication (including Media Arts) and Nursing. JMU's academic program changes reflected how the Commonwealth and higher education in America changed to address the needs of vastly different technological and cultural environments. The economy of our country was rapidly moving from a largely industrial economy to one based on service and technology. The aging population (including this baby-boomer) has influenced the rapid growth in the health sector. So as the economy, technology and population changed, so did the knowledge, skills, and abilities needed by college graduates. The Commonwealth, and families that send students to JMU, called for the institution to broaden its curricular offerings-especially Science, Technology, Engineering and Mathematics (STEM) and Health-and modernize how instruction is delivered. Because of all these changes, there are three more questions that need to be addressed: first, how did JMU grow its infrastructure (buildings and grounds) to match the changes in JMU's academic disciplines and its mission; second, how have these changes been financed; and third, how effectively and efficiently have these changes been managed?

Infrastructure Changes

Since 1987, JMU constructed, renovated, or purchased and renovated more than 2.2 million assignable square feet (ASF) in 43 major buildings. Approximately 1.4 million ASF in 23 buildings were funded by the Commonwealth (Educational and General funding – E&G) and 850,000+ ASF in 20 buildings were funded by donations, auxiliary earnings (like bookstore and dining services), student fees and other sources. This does not include major structures like the expanded Bridgeforth Stadium. Since 1987, more than 500 million

Type and Function	Number	ASF	Funding
New Construction			
Instructional and Academic Support	10	628,011	E&G
Athletics	1	30,355	Aux
Student Services	2	197,601	E&G
Institutional Support	3	89,506	E&G
Dining	2	62,366	Aux
Student / Other	6	323,659	Aux
Housing	6	343,448	Aux
Total	30	1,674,946	
Purchased and Renovated			
Instructional and Academic Support	2	160,849	E&G
Renovated			
Instructional and Academic Support	5	301,072	E&G
Institutional Support	1	6,657	E&G
Housing	5	99,835	Aux
Total	11	407,564	
Grand Total	43	2,243,359	



dollars has been expended on facilities to meet the growing needs of our students.

How well did the growth in facilities correspond with the growth in students and changes in the types of programs offered? The two charts below display how E&G and Auxiliary Enterprise spaces grew compared to growth in fall headcount. Between 1987 and 2016, E&G space grew at a higher rate than headcount while Auxiliary space grew at approximately the same rate as headcount. As shown below, the E&G space growth reflected the increase in the number of programs like STEM and Health that require more space per student. In 1987, there were 62 ASF per student in E&G programs. This grew to 88 ASF (+43%) by 2016. On the other hand, Auxiliary space stayed essentially the same at 99 ASF per student.



The changes in E&G space between 1987 and 2017 almost entirely reflect new, renovated, or purchased and renovated (93%) spaces. Some of these "new" or "renovated" spaces were completed more than 25 years ago (Zane Showker and Burruss Halls) and are now in need of upgrades. Auxiliary-funded space in 2017 is comprised of 46% new or renovated space since 1987. Sixty-eight percent of the new or renovated Auxiliary space was in housing and UREC. Overall, of the 4 million ASF space in 2017 more than 55% was entirely new, renovated, or purchased and renovated during the past 30 years.

E&G Assignable Square Feet by Function

There are seven different types of E&G space that reflect the major functions of the university. These include:

- General Academic Instruction (classrooms, labs, faculty offices),
- Research, Public Service,
- Academic Support (provost, deans, Learning Centers, etc.),
- Libraries and Media,
- Student Support (counseling, financial aid, admissions, etc.),
- Institutional Support (executive administration, finances, computing services, etc.), and
- Physical Plant.

MSC 3803 Harrisonburg, VA 22807 Phone: (540) 568-6830

The comparison of the distribution of space by function between 1992 and 2017 reflects the changes in the complexity of JMU. General Academic Instruction, Academic Support, and Libraries (63% of space) are still the predominant uses of E&G space, compared to 80% in 1992. Student Support and Institutional Support in 2017 (18%) command a larger proportion of E&G space than in 1992 (11%). These differences reflect the increased services required by students as well as the dramatic increases in computing services, fundraising and compliance/financial reporting.



The changes in space devoted to libraries reflect how current students and faculty use libraries to obtain information. However, there is still a need for additional library space. The 2015-16 physical and digital/electronic collections' circulation was 888,740, compared to 186,014 in 1987-88. Therefore, a proposal for a significant addition to Carrier Library to address critical needs has been submitted to the State Council on Higher Education for Virginia (SCHEV).

Classroom and Lab Space by Purpose

The vast majority of instruction occurs in classrooms, regularly scheduled labs and open labs. Below are the definitions of each type of space and its purpose. These definitions are from the State Council of Higher Education for Virginia's (SCHEV) "Guidelines for Higher Education Fixed Assets for Educational and General Programs" (dated February 10, 1995).

- 110: General Purpose Classrooms "A room used for scheduled classes and that is also not tied to a specific subject or discipline."
- 210 Class Laboratory "A room used primarily for formally or regularly scheduled classes that require special purpose equipment or a specific room configuration."
- 220 Open Laboratory "A laboratory used primarily for individual or group instruction that is informally scheduled, unscheduled, or open."

The types of instructional spaces constructed and purchased/renovated since 1987 are dramatically different compared to those facilities that were not changed significantly. There is little space at JMU, even in the oldest buildings, that has not been modernized and updated in the



MSC 3803 Harrisonburg, VA 22807 Phone: (540) 568-6830

last 30 years. All classrooms and labs contain computers and projectors of some type. Wi-Fi is available in virtually all areas across campus.

In 1987, faculty were fortunate to have an overhead projector for acetate slides. You would be hard pressed to find an overhead projector in use now. There was no campus-wide network. The Internet in its current form did not exist.

All new instructional space since 1987 includes 31% classrooms, 15% class labs and 54% open labs. Purchased and/or renovated space includes 40% classrooms, 13% class labs, and 47% open labs. Other buildings that did not undergo significant structural changes have 61% classrooms, 15% class labs and 24% open labs.

The distribution of space by purpose mirrors the changes in disciplines. In 1992, 49% of ASF was in general purpose classrooms compared to 39% in 2017. ASF growth in general purpose classrooms was 92% compared to 19% in class labs and 421% in open labs.



It is fascinating to note the changes in the number of seats/work stations between 1992 and 2017 by room use type. General purpose classroom seats grew by 67% from 5,268 in 1992 to 8,807 in 2017; class lab seats/stations actually declined by 8% from 1,550 to 1,433; and open lab seats/stations grew by 290% from 1,070 to 4,175. Academic departments or disciplines that use the most open lab space constructed and/or renovated since 1987 include ISAT, Engineering, Theater and Dance, Nursing, Music, Art, Biology, Chemistry, Computer Science, Geology, Media Arts and Physics.

General purpose classrooms, while representing 61% of total seats or work stations available, represent 85% of fulltime equivalent students (FTES) generated. Class labs, which are regularly scheduled, generate 10% of FTES. Open



ffice of Institutional Research MSC 3803 Harrisonburg, VA 22807 Phone: (540) 568-6830

labs have 29% of total seats/work stations, which are by definition not regularly scheduled, and generate 6% of total FTES.

It is no small achievement to build/renovate academic space to meet the changing academic programatic needs of an institution that has grown like JMU. It normally takes five or six years to carefully consider the types and amounts of space that might be needed, obtain funding, design, and construct/renovate the building.





New College of Health & Behavioral Studies Building Under Constuction 2015

In the early 1980s, SCHEV developed objective standards to judge how well each Virginia public institution has efficiently matched instructional needs to available space. For more than 30 years, JMU has annually met or exceeded SCHEV's standards. The standards include average weekly hours of room use and percentage of seats/stations filled. SCHEV's standard for average weekly hours of use for each 110 classroom seat is 24 hours. The standard for average weekly hours of use for each 110 classroom seat is 24 hours. The standard for average weekly hours of use for each lab (210) space is 18. In 2017, JMU's average weekly hours of 110 classroom seat/station use was 24.2 and 21.5 for 210 class labs.

In 1987, all instruction occurred in the Bluestone Area of campus. By 2016, that percentage had declined to 42%. The chart below displays the number of FTES generated in different areas of the campus. About 15 years ago the time allocated for students to move between classes was increased from 10 to 15 minutes. Thirty years ago it was possible to move between classrooms and labs within 10 minutes. In 2017 it can take 30 minutes to walk from a class in the Skyline Area to Memorial Hall. In 1987 there was no need for buses to shuttle students between classes. In 2017 there are extensive bus services, and students check on the buses with an app on their phone.





MSC 3803 Harrisonburg, VA 22807 Phone: (540) 568-6830

Class Size

With all the growth in students and instructional space, how has this growth affected class sizes? The table to the right shows that the proportion of classrooms/labs with 20 or fewer seats declined from 13% in 1992 to 7% in 2017. In 2017, there are two classrooms that seat more than 200 students. In 1992, the average number of seats in 110 classrooms was 43, and in 2017 it was 47. In light of the university's enrollment growth in that same time frame, this change is insignificant, reflecting the university's continuing commitment to our students,

Number of Classrooms by Station Ranges								
Station Range	1992	Percent	2017	Percent				
<=20	15	13%	13	7%				
21-40	63	53%	110	58%				
41-60	23	19%	39	21%				
61-100	12	10%	13	7%				
101-200	7	6%	12	6%				
>200		0%	2	1%				
Total	120		189					

keeping classroom sizes – as well as student/faculty ratio – as small as possible.

The table to the right compares the median class sizes for undergraduates in 1992 and 2016. These data are segmented by room use and course level. The 100-level and 200-level courses are what the typical freshman will take his/her first and second years. For general purpose classrooms (110) the median class size increased from 26 to 27 between 1992 and 2016. For the 210 class labs the median increased from 19 to 22. The median decreased from 18 to 16 for the 220 open class labs. Freshmen and sophomores are likely to have slightly larger lecture classes than in 1992, but the typical enrollment in labs has not changed. One can infer that the larger classrooms have enabled larger class sizes to be accommodated, especially at the 100 level 110 classrooms (32 to 43). The number of students in labs has remained relatively stable since 1992.

Median Class Sizes by Course Level							
Room Use	Course Level	1992 Median HC	2016 Median HC				
110 Classrooms	100 Level	24	29				
	200 Level	32	30				
	300 Level	25	24				
	400 Level	20	18				
	Total	26	27				
210 Scheduled Labs	100 Level	23	24				
	200 Level	21	24				
	300 Level	17	19				
	400 Level	8	14				
	Total	19	22				
220 Open Labs	100 Level	22	22				
	200 Level	21	17				
	300 Level	12	16				
	400 Level	4	12				
	Total	18	16				
Grand Total		24	24				

Student Housing

As is common for a traditional undergraduate university like JMU, a small percentage of the undergraduates are "locals," thus making it necessary for students to live either in university-owned housing or in the community. From its beginning as the State Normal and Industrial School for Women in Harrisonburg to the late 1970s, most of the students lived in on-campus housing. Approximately 150,000 unique students have lived in university housing since 1987. As it became too expensive to build sufficient on-campus housing to accommodate all the students, many additional off-campus housing options became available. In 1987, most students who wished to live in university housing could. In 1988, 55% of undergraduates lived in the residence halls compared to 33% in 2017. While the residence halls up until about 2000 had a mix of



undergraduates by academic level, 73% of the beds were filled by freshmen by 2017. Most undergraduates live in apartment complexes surrounding the university. There is an extensive bus service between the off-campus apartment complexes and the different areas of the campus. There is even an app that students use to determine when and where the buses will transport them to and from the campus.

Housing	1988	2002	2017
Number of undergraduates	9,434	14,402	19,379
Number living in University housing	5,167	5,825	6,405
Percent living in University housing	55%	40%	33%
Percent of undergraduates living in University			
housing that were Freshmen	44%	60%	73%

JMU has constructed impressive new housing and renovated many existing residence halls, but there is simply not enough space and money to accommodate all students, because it is more expensive per ASF for JMU to build residence halls. Most students

wish to live off-campus after their freshman year, but there are some students (or their parents, like this JMU dad), who would prefer to live on-campus their sophomore year, but cannot. In fall 1992, 58% of sophomores lived in university housing compared to 26% in fall 2017.

Student Opinions about Facilities

What do students think about the facilities at JMU, and how have these opinions changed since 1987? Fortunately, the Continuing Student Survey has been conducted for more than 40 years, and many questions have not changed. The table to the right shows the percentage of students who said they were "Very Satisfied" or "Satisfied" with many aspects of the campus and facilities. Virtually all students were/are satisfied with the general

Level of Satisfactions With:	1987	2002	2016
General condition of buildings and grounds	97	96	97
Dining facilities and quality of food	89	72	93
Class size relative to course	88	84	89
Personal security and safety	86	80	97
Class / lab facilities	85	79	85
Athletic facilities	79	70	97
Study areas	72	69	77

condition of the buildings and grounds. This sentiment was echoed by long-time faculty, staff, and administrators. Given the high national ranking of JMU's food services (5th in the most recent Princeton Review) it isn't hard for students to put on the "Freshman 15" during their first year. Students continue to be satisfied with the class sizes relative to the course being taken and the quality of the classrooms and labs. Students appear to be very satisfied with the efforts to ensure personal security and safety. It is evident that JMU has done a remarkable job of maintaining or improving the quality of its facilities during this period of rapid growth and constant construction.

Finances

JMU has experienced dramatic changes in almost every conceivable way since 1987. The student body more than doubled, the academic programs greatly diversified (growth in STEM/Health), and technology permeates almost every aspect of the education enterprise. The physical plant more than doubled, along with the expansion of many services to students, faculty and staff. Along with changes in students, JMU's faculty, staff, and administrators have also undergone significant changes. Only 4% (116 out of 3,012 in 2017) of these employees have been at JMU since 1987. The political, economic, regulatory, and technological environments also changed significantly. The question is, how have all these changes been financed? What challenges has JMU faced in the last 30 years to address funding issues?

It should be noted that JMU has met or exceeded all financial standards from the Commonwealth since they were established in 1987. This is a remarkable accomplishment and testifies to how well JMU manages its finances.

MSC 3803 Harrisonburg, VA 22807 Phone: (540) 568-6830

Since 1990, OIR has periodically published reports that describe the finances of the university in three dimensions: appropriations, expenditures, and tuition and fees. In the next sections, we will describe the highlights for each dimension. The finance document compares JMU to the national, regional and Commonwealth's challenges.

Appropriations

Nationally, the vast majority of states have experienced inconsistent revenues – combined with significant pressures to fund a variety of critical initiatives like health care and corrections. One result of this difficult combination of factors has been a decline in the state appropriations going to higher education. The FY17 appropriations per \$1,000 of personal income (a measure of the state's ability to pay) were 25 % below FY07 and 42 % below FY88.

Since 1988, Virginia's appropriations declined by 53 %. In FY17, Virginia ranked 36th in appropriations per \$1,000 (41st in FY16.).

Virginia -53% National Average -42% nding Since

Regionally, in 2015-16 state general fund operating appropriations per FTE student in Virginia ranked in the middle of Southern Region Education Board (SREB) states. Virginia ranked 6th highest out of 14 states.



In 2017-18, JMU's total E&G appropriation per student is \$13,995, down from \$14,121 in 2016-17. JMU is now effectively tied with Longwood for 7th out of the nine Virginia comprehensive institutions.

Expenditures

JMU's support of instruction is *second highest* among its peers when JMU is compared to the public institutions in its national peer group (approved in 2007 by SCHEV), using 2014-15 data—the last year that data are available from IPEDS.

Of the Virginia comprehensive institutions in 2014-15, JMU ranks first in the percent of E&G budget spent on instruction and academic support (combined) and lowest in the percent of E&G budget spent on institutional (administrative) support.

JMU ranks second lowest in terms of dollars expended on institutional support per FTES at \$1,725 per FTES (FY15) when compared to the other Virginia four-year public institutions. JMU increased expenditures on institutional support by \$183 over FY14, but it is \$3,083 less than the highest (UVA). On a per-student basis, JMU has been administratively one of the leanest public institutions in the Commonwealth for more than 25 years.

MSC 3803 Harrisonburg, VA 22807 Phone: (540) 568-6830

Instructional and academic support expenditures as a percent of FY15 E&G expenditures: SCHEV peers.

Institutional support expenditures as a percent of FY15 E&G Expenditures: SCHEV peers

Salaries at JMU have roughly mirrored changes at the national level but appear to have greater positive and negative percentage changes. The average faculty salary at JMU for 2014-15 is \$5,000 below the 60th percentile of faculty salaries for JMU's SCHEV peer group. However, in the previous year, JMU was \$13,000 below this benchmark, indicating that although more study is needed, efforts to close the gap may be working.

Benefits as a percentage of salaries have mushroomed in the last 30 years due primarily to higher costs for medical insurance. For instructional faculty benefits as a percentage of total salary increased from 25 % in 1991-92 to 44 percent in 2016-17. The benefits percentage is higher for many classified staff and professionals that do not have the larger salaries that faculty receive. Much of the increase from 33 % in 2013-14 to 39 % in 2016-17 was due to higher health insurance and the need to improve the long-term solvency of the Virginia Retirement System.

Average salary and benefits for full-time instructional faculty 2005-06 to 2016-17

MSC 3803 Harrisonburg, VA 22807 Phone: (540) 568-6830

Tuition and Fees

Although JMU has been diligent in keeping its tuition among the lowest in the Commonwealth, Virginia's overall instate tuition and fees among comprehensive universities are higher than corresponding national and regional averages. The Commonwealth's tuition ranks as the fifth highest state in the nation. Virginia has the second highest tuition and fees for in-state undergraduates at similar regional institutions. (Southern Region Educational Board – SREB).

Among the Commonwealth's 15 four-year public colleges and universities, JMU's total in-state costs (tuition, fees, room and board) ranks 10th. JMU's out-of-state total cost also ranks 10th. Largely reflective of the decrease in state appropriations, JMU's total tuition, fees, room and board increased by 287% from \$5,426 in 1987 to \$20,990 in 2017-18. The Consumer Price Index increased by 115% during these years.

Virginia's average in-state undergraduate charges as a percentage of per capita disposable income have equaled or exceeded the national average since SCHEV began tracking this measure 25 years ago. In other words, a higher percentage of Virginian household disposable income goes to paying in-state tuition and fees relative to other states.

\$27,278

Changes in the Percent of Total Educational Costs Shouldered by In-State Students and the Commonwealth

Average Total In-State Undergraduate Charges at Public Four-Year Institutions as a Percent of Per-Capita Disposable Income

2010-11

2011-12

2012-13

Year IN-STATE OUT-OF-STATE

2013-14

2014-15

2015-16

2016-17

2017-18

\$5,000

\$0

2008-09 2009-10

Rank	k In-State Tuition		Out-of-State Tuition		Required Fees		Room and Board		Total In-State		Total Out-of-State	
1	W&M	\$16,506	UVA	\$44,338	VMT	\$9,330	W&M	\$11,799	W&M	\$33,843	UVA	\$57,588
2	UVA	\$13,810	W&M	\$38,132	W&M	\$5,538	CNU	\$11,224	VMT	\$27,450	W&M	\$55,469
3	VCU	\$11,483	VMT	\$34,572	CNU	\$5,384	GMU	\$11,090	UVA	\$27,060	VMT	\$53,138
4	VT	\$11,263	VCU	\$31,515	LU	\$5,100	UVA	\$10,992	CNU	\$24,878	GMU	\$45,460
5	VMT	\$8,864	GMU	\$31,118	JMU	\$4,628	VSU	\$10,880	VCU	\$23,811	VCU	\$43,843
6	GMU	\$8,672	VT	\$29,047	UVAW	\$4,296	LU	\$10,418	LU	\$23,138	VT	\$39,704
7	UMW	\$8,306	ODU	\$24,498	UMW	\$3,822	UVAW	\$10,314	GMU	\$23,014	ODU	\$38,322
8	CNU	\$8,270	UMW	\$23,552	ODU	\$3,702	UMW	\$10,216	UMW	\$22,344	LU	\$38,078
9	LU	\$7,620	UVAW	\$22,759	NSU	\$3,558	VCU	\$10,187	VT	\$21,920	UMW	\$37,590
10	RU	\$7,461	JMU	\$22,650	GMU	\$3,252	ODU	\$10,122	JMU	\$20,990	JMU	\$37,390
11	ODU	\$6,648	LU	\$22,560	VSU	\$3,179	JMU	\$10,112	ODU	\$20,472	UVAW	\$37,369
12	JMU	\$6,250	CNU	\$20,466	RU	\$3,166	NSU	\$9,866	UVAW	\$20,139	CNU	\$37,074
13	VSU	\$5,547	RU	\$19,543	UVA	\$2,258	VMI	\$9,236	RU	\$19,758	RU	\$31,840
14	UVAW	\$5,529	NSU	\$17,680	VCU	\$2,141	RU	\$9,131	VSU	\$19,606	NSU	\$31,104
15	NSU	\$5,478	VSU	\$16,393	VT	\$1,967	VT	\$8,690	NSU	\$18,902	VSU	\$30,279

In-State and Out-of-State Undergraduate Tuition, Required Fees, and Room and Board for Virginia's State-Supported Institutions of Higher Education, 2017-18

Financial Aid

As the cost of an undergraduate education has risen dramatically, the need for financial aid for many students who need assistance has also increased. According to data provided by OIR to SCHEV, the percentage of in-state undergraduates eligible for financial aid at JMU increased from 27% in 1992-93 to 41% in 2016-17. The total costs (tuition, fees, and room and board) for a full-time in-state freshman living on-campus in 1987-88 was \$5,426 (\$11,561 adjusted for inflation). By 2016-17, the total costs of attendance increased by 82%.

Students who wish to be considered for need-based financial aid must complete the Free Application for Federal Student Aid (FASFA) form. During the last 25 years, the percentage of Virginia students that applied for need-based aid increased from 34% to 59%. The percent eligible increased from 27% to 41%. For non-Virginia students the percentage that applied for need-based aid increased from 34% to 54%. The percent eligible increased from 23% to 36%. For in-state students the percent that applied and were accepted has been stable for more than 15 years. Pell Grants are given to the most financially needy students. Eighteen percent of in-state students were eligible (6% out-of-state). It is clear that out-of-state students are more likely to come from homes that can afford JMU.

The range of aid available includes grants (e.g., Pell, SEOG), scholarships, work study, other types of aid and loans. Out-of-state students are far more likely to depend upon loans (78% of dollars allocated) compared to in-state students (66%). Out-of-state students are less likely to receive grants and scholarships (19%) than in-state students (31%).

There has been a significant increase in the different sources of funds for students with demonstrated need. Since 1992-93, nearly 1.3 billion dollars has been distributed to JMU students. In the last decade, the amount of aid distributed annually increased from \$50,796,541 to \$109,979,061 (116%). Since 2006-07, the percentage of undergraduates with need increased from 31% to 41%. How well has the average financial aid distributed kept pace with the rising number of eligible students and rising charges (tuition, fees, room and board)? As shown in the figures below, in 2006-07 the average total distribution (\$10,798) for full-time in-state students with need covered

MSC 3803 Harrisonburg, VA 22807 Phone: (540) 568-6830

approximately 73% of charges. By 2016-17, the percentage was 74%. The percentage covered for out-of-state students decreased from 66% to 60%.

Financial Aid Distributed to Full-Time Students with Demonstrated Need by Academic Level, 2006-07 and 2016-17, According to SCHEV Data

			Underg	raduate	Grad			
			Percent of					
				Full-Time	Student			Full-Time
		Unique	Unique Average Student Charges			Unique	Average	Student
Residency	Year	Students	Distribution	Charges	Covered	Students	Distribution	Charges
In-State	2006-07	2,845	\$10,798	\$13,046	83%	202	\$11,703	\$6,336
In-State	2016-17	5,017	\$14,810	\$20,118	74%	256	\$14,820	\$10,752
Out-of-State	2006-07	1,312	\$15,202	\$22,992	66%	88	\$13,476	\$17,832
Out-of-State	2016-17	1,477	\$21,478	\$35,892	60%	106	\$23,104	\$28,296

Unfortunately, although the amount of financial aid available for students has more than doubled in the last 10 years, the rising number of students with need are finding it more difficult to afford the higher tuition, fees, room and board.

MSC 3803 Harrisonburg, VA 22807 Phone: (540) 568-6830

JMU Foundation

As the need for financial assistance has grown rapidly across higher education, many institutions, like the University of Virginia and Virginia Tech, have used endowments to provide financial assistance to needy students. Unlike institutions that have such large endowments to use for scholarships and needy students, JMU has struggled. Given JMU's beginnings as a normal school, JMU has had challenges soliciting funds from typically less-wealthy alums.

As JMU has changed and grown over the last 30 years, so has the JMU Foundation. Prior to 1987, the Foundation was an interdependent organization, with only part-time staff and an outside accountant. In 1987, the Foundation hired its first full-time employee, a treasurer position, who was charged with moving the accounting function from a manual to an automated process. The Foundation became autonomous, eventually hiring a President/CEO, CFO and a staff of accountants. The Foundation Board in 1987 was comprised of 9 individuals who represented JMU leadership, the Foundation President and volunteer individuals who had a passion for the university. The board has evolved into twenty-one trustees including two ex-officio members from the university and two to three non-voting adjunct trustees from the Foundation.

During Dr. Ronald Carrier's tenure as President, the Foundation assets grew from \$5,245,686 to \$25,143,131. He turned the reins of the university over to Dr. Lynwood Rose, who upon his retirement in 2012, saw the total assets of the Foundation grow to \$89,557,037. During Mr. Alger's tenure as president the total assets of the Foundation have grown to \$148,178,567, as of June 2017.

The market value of the endowment grew from \$5,659,414 at the start of 1990-91 to \$93,160,366 as of 2016-17. As the market value of the endowment has grown over the years, so has the number of FTE students. With the growth of FTE students from 10,423 in 1991 to 18,824 in 2017, the amount of Endowment Assets per FTE has also grown from \$566 to \$4,949 per student. The amount of scholarship funding provided to the university in 2017 was \$3,466,527, a huge increase from the 1991 funding of \$524,968.

Some Observations

JMU in 2017-18 is a vastly different and more complex institution than it was in 1987-88 in many dimensions. In some ways, however, it is not.

Changes:

- Enrollment growth, and the subsequent expansion of the facilities and campus, has been the most important driver of change across the campus. Campus expansion has led to increased challenges to get to know people. In 1987 100% of all FTES were delivered in the Bluestone Area of campus. The rapid expansion of the academic footprint resulted in a decline to 42% by 2016.
- The types of instructional spaces constructed and purchased/renovated since 1987 are much more likely to have higher proportions of lab space compared to those spaces that were not changed significantly.
- Assignable E&G square feet per student increased from 62 ASF in 1987 to 88 in 2017. Most of the growth was in unscheduled class labs.
- The growth of the university and expansion of services to students, faculty and staff resulted in faster growth in non-general instructional space from 41% in 1992 to 53% in 2017.
- Freshmen and sophomores are likely to have larger classes than in 1992 with the median size class increasing from 24 to 29, and the average increased from 32 to 43.
- Of the 4 million ASF space in 2016, more than 55% was entirely new, renovated, or purchased and renovated.
- University housing did not keep pace with the rapid growth of the undergraduate population, mostly due to the high costs of construction and the fact that most undergraduates prefer to live in the housing complexes near the university. In 1987 most students who wished to live in university housing could. In 1988 55% of undergraduates lived in the residence halls compared to 33% in 2017. While the residence halls up until about 2000 had a mix of undergraduates by academic level, by 2017 73% of the beds are filled by freshmen.
- The rapid growth of students, the campus, and technology resulted in a loss of individuality and closeness to people. Some people feel more isolated and less belonging to the institution than 30 years ago.
- Higher education in Virginia has seen appropriations decline by 53 % since 1988. In FY17 Virginia ranked 36th in appropriations per \$1,000 of personal income.
- The share of total educational costs borne by the Commonwealth for in-state students decreased from 62% in 1993-94 to 47% in 2017-18. In 2001-02 the Commonwealth's share was 77%. The goal has been for the Commonwealth to fund at least 60%.
- Benefits as a percentage of salaries have mushroomed in the last 30 years due primarily to higher costs for medical insurance and the need to shore up the funds for the Virginia Retirement System. For instructional faculty, benefits as a percentage of total salary increased from 25 % in 1991-92 to 44 % in 2016-17.
- Tuition and fees continue to increase rapidly. Virginia's average in-state undergraduate charges as a percentage of per capita disposable income have equaled or exceeded the national average since SCHEV began tracking this measure 25 years ago. In other words, a higher percentage in 2017 of Virginian household disposable income than in 1987 goes to paying in-state tuition and fees relative to other states.
- JMU's total tuition, fees, room and board increased by 287% from \$5,426 in 1987 to \$20,990 in 2017-18.
- As tuition, fees, room and board have risen significantly, so did the number and percentage of students needing some types of financial aid. During the last 25 years the percentage of Virginia students that applied for need-based aid increased from 34% to 59%. The percent eligible increased from 27% to 41%. For non-

Virginia students the percentage that applied for need-based aid increased from 34% to 54%. The percent eligible increased from 23% to 36%.

- Out-of-state students are more likely to depend upon loans (78% of dollars) compared to in-state students (66%). Out-of-state students are less likely to receive grants and scholarships (19%) than in-state students (31%).
- Although the amount of financial aid available for students has more than doubled in the last 10 years, the rising number of students with need are finding it increasingly difficult to afford the costs.
- The market value of the endowment grew from \$5,659,414 at the start of 1990-91 to \$93,160,366 as of 2016-17. The amount of Endowment Assets per FTE has also grown from \$566 to \$4,949 per student. The amount of scholarship funding provided to the university in 2017 was \$3,466,527, a huge increase from the 1991 funding of \$524,968.

Changed Little or Remains the Same

After examining all the things that did change in the last 30 years, one might begin to wonder if anything stayed the same. Some answers can be found in the numbers but also in the people.

- The overall growth of the university's physical plant continues to mirror the growth in students and academic programs.
- Students' levels of satisfaction with facilities remains high despite the rapid growth of the campus. Virtually all students were/are satisfied with the general condition of the buildings and grounds. Students continue to be satisfied with the class sizes relative to the course being taken and the quality of the classrooms and labs. Students appear to be very satisfied with the efforts to ensure personal security and safety. These sentiments were echoed by long-time faculty, staff, and administrators
- JMU continues to meet all of SCHEV's standards for efficient use of classrooms and labs.
- JMU has met all of the Commonwealth's financial standards since their inception in 1987.
- The median class sizes in labs remain virtually the same, allowing for the same close guidance as in 1987. The median number of students enrolled in 210 class labs increased slightly from 19 to 22. For the 220 open class labs, the median decreased from 18 to 16.
- Students, faculty and staff are still amazed at the beauty of the campus and the continued commitment to outstanding buildings and grounds.
- Virginia institutions, including JMU, continue to charge higher tuition and fees than other states despite the fact that the Commonwealth has the 10th highest per capita income in the country and ranks 42nd in General Fund State appropriations per FTE student.
- On a per-student basis, JMU has been administratively one of the leanest public four-year institution in the Commonwealth for more than 20 years.

JMU's facilities and finances, like students, faculty and staff, are vastly different in many ways than they were 30 years ago, but it appears that there are important common characteristics and actions that have, thankfully, remained the same. It is amazing that an institution can change as much as JMU has while maintaining, or even improving, the beauty of the campus and the ways resources have been carefully used.

Questions about this Research Note can be directed toward Dr. Frank Doherty at dohertfj@jmu.edu.