W&M Faculty Workload

The Office of the Provost & Faculty Assembly

BOV Academic Affairs Committee

April 20, 2023

BOV Meeting September 2022

It is the Board's request that the Faculty Assembly work with the President and Provost to facilitate the *effective implementation of the strategic plan and analyze faculty productivity.*

In addition to any other tasks identified by the Provost, the Board asks the Provost, in consultation with the Faculty Assembly, to report to the Board at its meeting in April 2023 on the following subjects:

1. Faculty productivity; and

2. Initiatives to support the significant growth of STEM disciplines and address any observed changes in the arts, humanities, and social sciences to ensure continued success in all areas.

Selected Initiatives

- Faculty positions in areas of high need (FY 2023)

- Computing, Data Science, and Applied Science initiative

- $500K in research initiation grants for the humanities and the arts

- Vision 2026 Faculty Innovators Grants

- Support evolving student interests and curriculum
  - Ensure consistent workload within and across schools to maximize teaching capacity
  - Explore the impact of research leaves on teaching and curriculum and enforce clear and transparent criteria for research-active faculty
  - Retirements: plan toward current and future needs

A Culture of Shared Data: Overview

- Faculty Contributions
  - R2 context
  - Standard faculty workloads
  - Faculty cohorts FY23
  - Faculty and enrollment trends
  - Teaching, research, service

- Data Validation
  - National datasets (e.g., IPEDS, HERD, USNWR)
  - W&M institutional data
  - Review with deans and Faculty Assembly

A Culture of Shared Data: Actions

- Sustainable Curriculum Implementation & Analysis (2021-23)
  - ✓ Assessment of long-term needs by each school
  - ✓ Data analyst in the Provost's Office
  - ✓ Research study by Huron Consulting

- Teaching Data Trends (2022-ongoing)
  - ✓ *Phase I*:   Data collection, sharing and validation
  - o *Phase II*: Mentored student research, advising, and independent studies

- Research Data Trends (2023-ongoing)
  - ✓ *Phase I*:   Data collection, sharing and validation
  - o *Phase II*: Research active, impact metrics, data dashboard, and infrastructure

Institutional Identity: W&M is R2

- **Doctoral Universities: High Research Activity (R2)**

  o >20 PhDs or <20 PhDs and 30 professional doctorates in >2 programs
  o Research expenditures: >$5M

- **R2**s in USNWR Top 50: Wake Forest (private) and W&M (public)

Profile of R1/R2 Universities

Carnegie Classification	Instructional Staff	FT Undergrad	FT Grad	UG Acceptance %	Student/ Faculty Ratio
W&M	672	6,465	1,741	37%	13:1
R1	1,352	18,511	5,798	57%	15:1
R2	605	9,467	1,804	75%	16:1

Source: IPEDS (2023); some institutions have a medical school

USNWR Top 50 National Universities 2023

Carnegie Classification	Instructional Staff	FT Undergrad	FT Grad	UG Acceptance %	Student/ Faculty Ratio
W&M	672	6,465	1,741	37%	13:1
Public	1,906	27,664	8,939	32.7%	17:1
Private	1,232	8,523	8,135	12.2%	8:1

Source: IPEDS (2023); some institutions have a medical school

R2 Comparison Group 2021

Institution	Total Enrollment	Percent Admitted	Graduation Rate	Faculty*	Student-Faculty Ratio/	Class Size Less than 20
William & Mary	**9517**	**37**	**91**	**672**	**13-1**	**45.8%**
American University	14852	64	79	812	12-1	58.4%
Southern Methodist University	12385	53	82	723	12-1	54.9%
Stevens Institute of Technology	8287	53	87	308	12-1	38.1%
University of Dayton	11971	81	80	670	15-1	38.3%
Wake Forest	8947	37	90	647	10-1	56.8%
Worcester Polytechnic Institute	7230	60	87	421	14-1	66.2%

Source: IPEDS data

*Does not include adjuncts

Faculty Responsibilities

Teaching

- 40% for T/TE
  - 2-2 standard load
- Non-Tenure-Track (NTE)
  - 3-3 standard load (80%)
- VIMS: 10%-20%

Research

- 40% for T/TE
- Scholarship
  - Grants/Contracts
  - Books/Articles
  - Presentations/Posters
  - Juried/Commissioned Works
  - Patents/IP/Registered Protocols
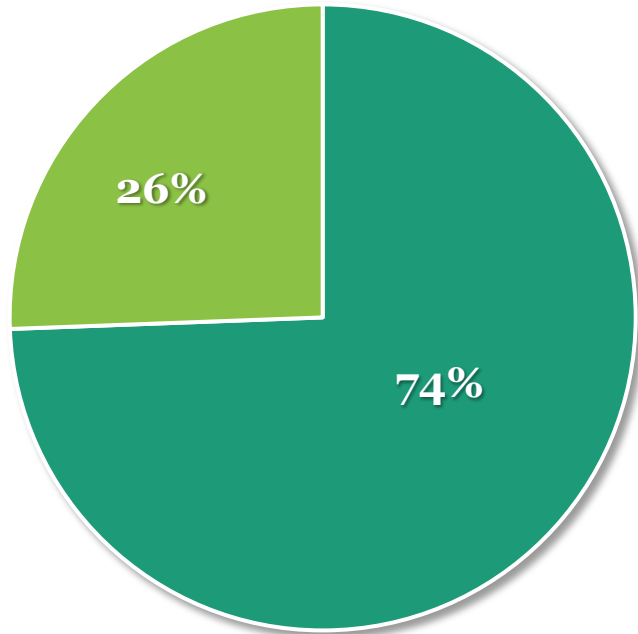 - Prizes, Citations, and Other Forms of Impact Assessment
- VIMS: 70-85%

Service

- 20% T/TE, 10-20% NTE
  - Unit
  - School
  - University
  - Profession
  - Community
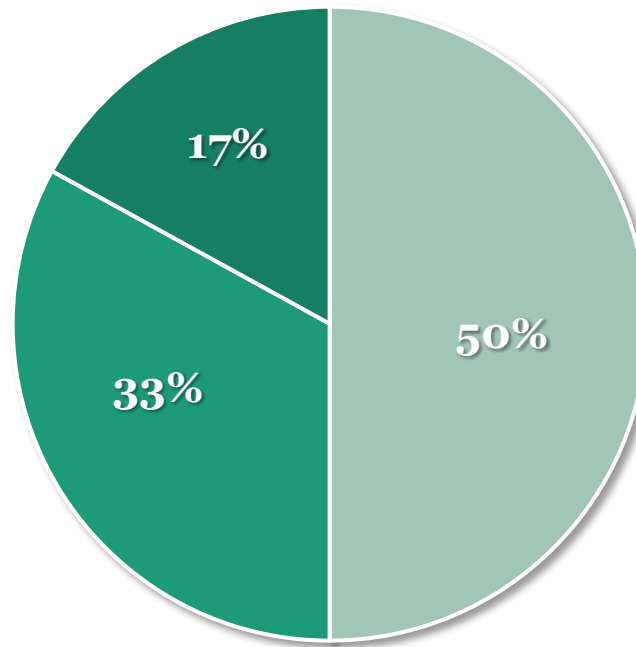- VIMS: 10-15%

Faculty Position Types - Fall 2022

Proportion of T/TE and NTE Faculty

- TT
- NTE

26%

74%

Tenured/Tenure-Eligible

17%

33%

50%

- Professor
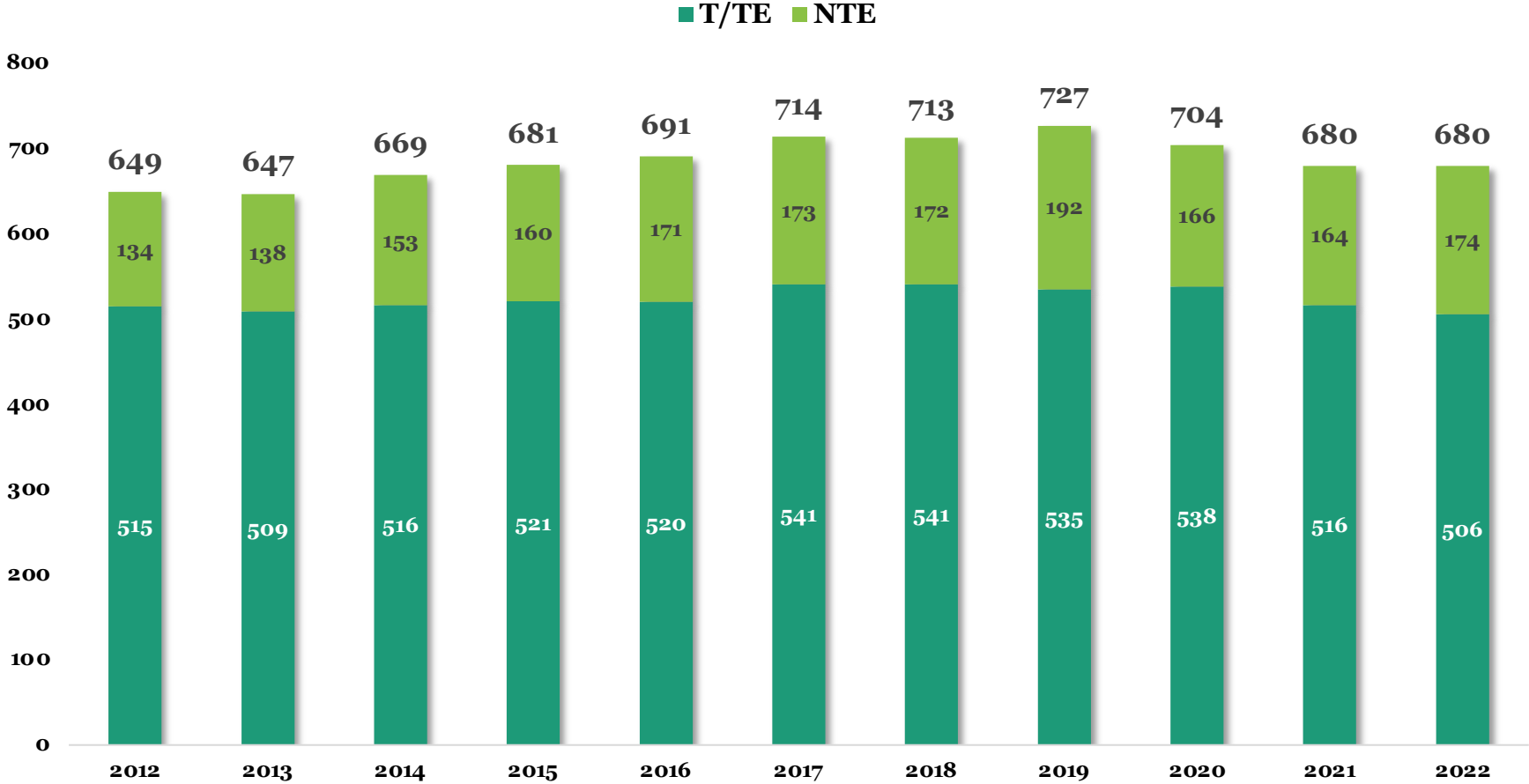- Associate Professor
- Assistant Professor

- 3 out of 4 full-time faculty are T/TE

- FY23-27 hiring to return to 12:1 S/F ratio, reduce larger class-sizes, support Vision 2026, increase number of assistant professors, and balance faculty workload

FACULTY & ENROLLMENT TRENDS

Faculty Positions – 10 years

T/TE and NTE Proportion Over Time

■ T/TE ■ NTE

| Year	T/TE	NTE	Total
2012	515	134	649
2013	509	138	647
2014	516	153	669
2015	521	160	681
2016	520	171	691
2017	541	173	714
2018	541	172	713
2019	535	192	727
2020	538	166	704
2021	516	164	680
2022	506	174	680

Note: Figures do not include all budgeted vacancies or adjunct faculty

Headcount vs Enrollment: FY18-FY22

- +10% Enrollments
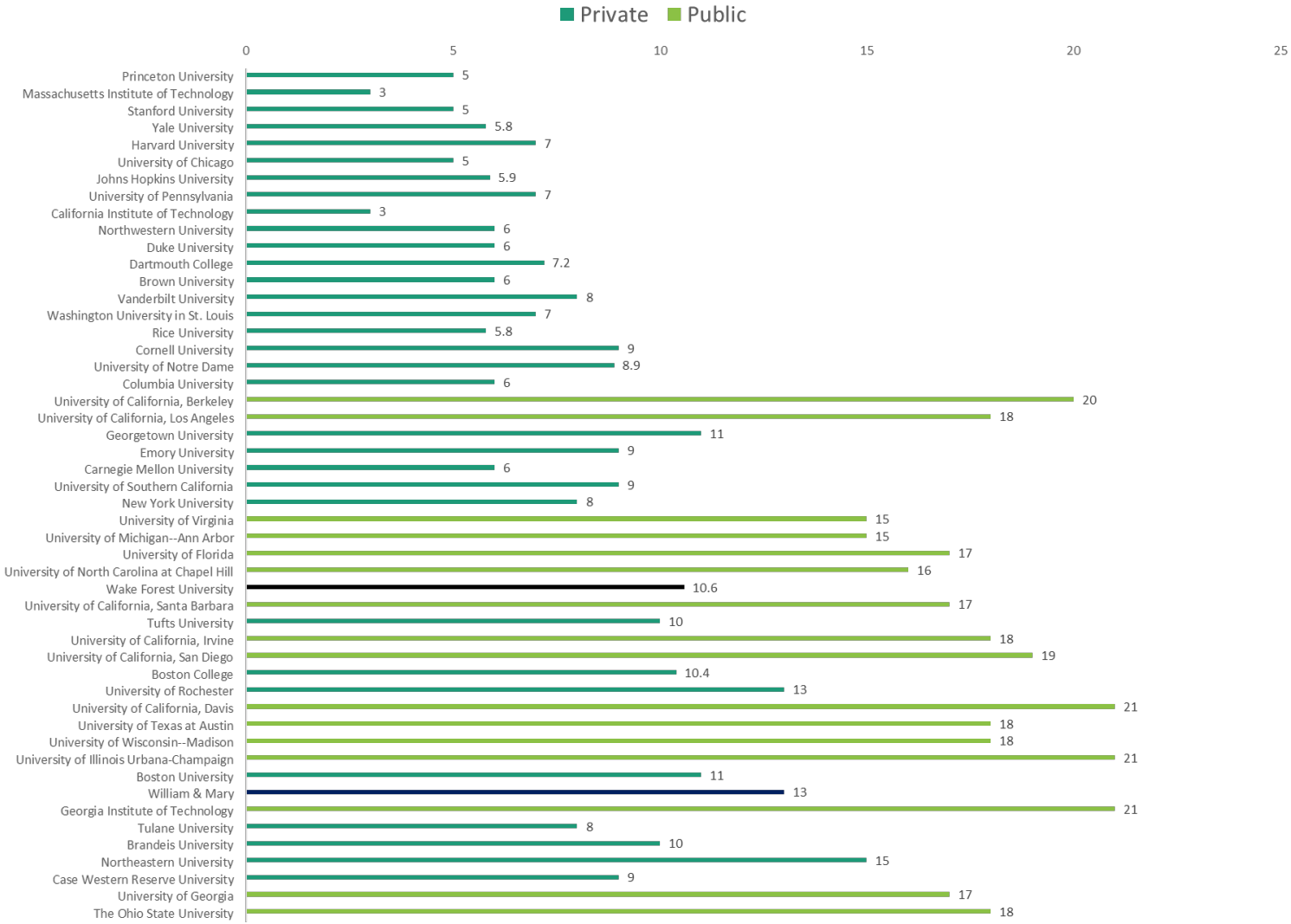- -6% Faculty
- -5% Staff
- -204 FTE

Legend: Total Enrollment, Faculty / Adjunct, Staff
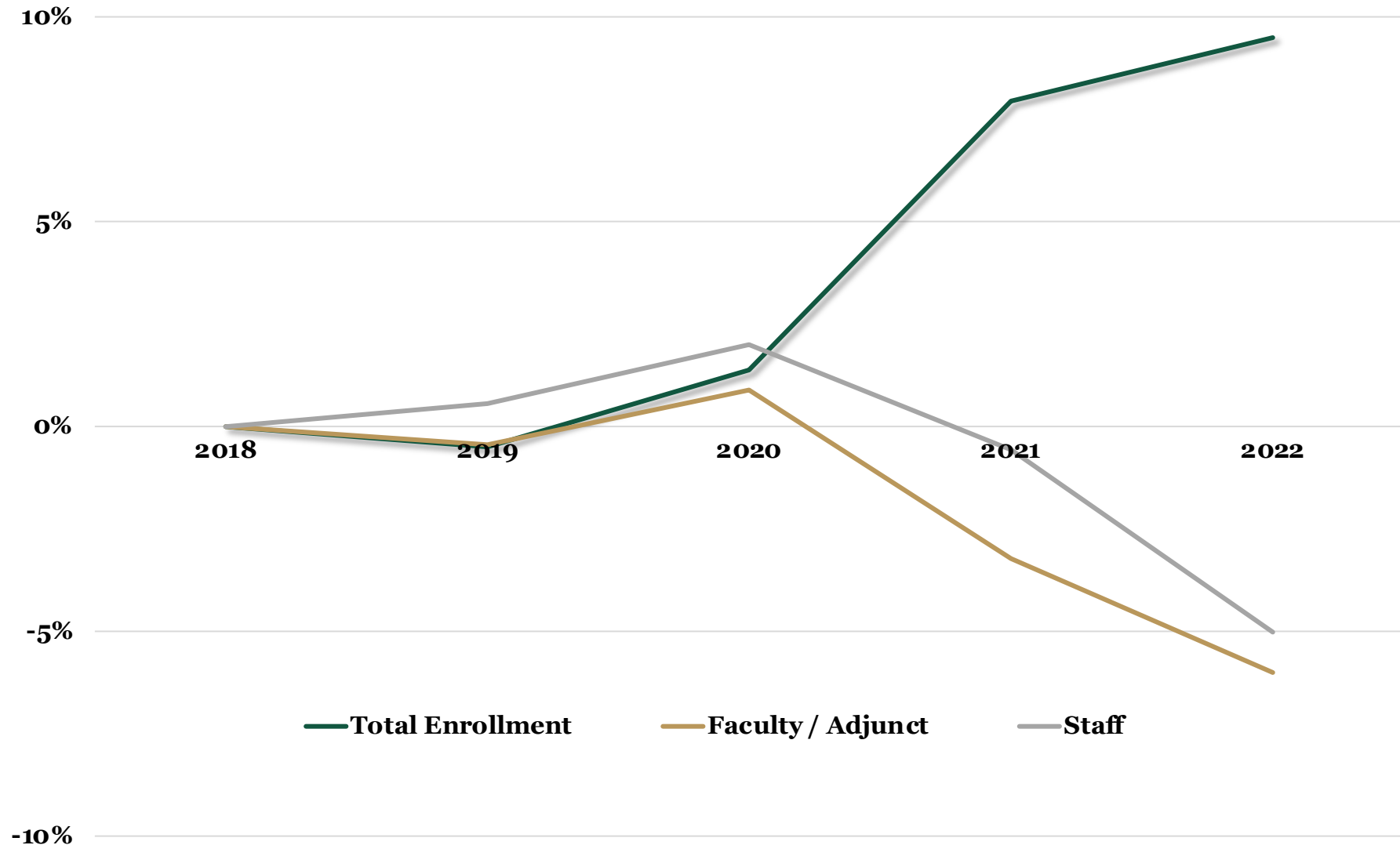
SCHEV Enrollment Data

| School | 2022 (est.) | Difference (Δ) | | |
| | | 1 Year | 4 Years (2019-2022) | |
		%	#	%
W&M	**9,602**	**0.9%**	**829**	**9.4%**
VSU	4,715	9.7%	350	8.0%
VT	38,230	2.6%	1,847	5.1%
GMU	39,510	0.9%	1,255	3.3%
NSU	5,780	5.9%	179	3.2%
UVA	25,481	-2.1%	463	1.9%
JMU	21,948	-1.0%	128	0.6%
LU	4,393	-4.7%	-75	-1.7%
ODU	23,073	-1.8%	-602	-2.5%
VCU	28,414	-1.7%	-1,689	-5.6%
CNU	4,559	-0.5%	-360	-7.3%
VMI	1,544	-6.5%	-154	-9.1%
UVA-W	1,780	-3.5%	-222	-11.1%
UMW	3,761	-4.9%	-727	-16.2%
RU	7,676	-14.7%	-4,194	-35.3%
4-Yr. Total	**220,466**	**-0.7%**	**-2972**	**-1.3%**
VCCS	144,866	0.5%	-13,207	-8.4%
RBC	2,113	-18.9%	-240	-10.2%
2-Yr. Total	**146,979**	**0.1%**	**-13,477**	**-8.4%**
Public Total	**367,445**	**-0.4%**	**-16,419**	**-4.3%**

- From 2019-22, W&M grew more rapidly than any other public university in VA as a % of total enrollment
- Enrollment growth helped balance the university's budget during a tuition freeze
- Richmond leaders have expressed concern with continued growth

Source: SCHEV, released 10/22/2022

Student to Faculty Ratio, USNWR Top 50 2023

Legend: ■ Private ■ Public

Chart — Student to Faculty Ratio:
- Princeton University: 5
- Massachusetts Institute of Technology: 3
- Stanford University: 5
- Yale University: 5.8
- Harvard University: 7
- University of Chicago: 5
- Johns Hopkins University: 5.9
- University of Pennsylvania: 7
- California Institute of Technology: 3
- Northwestern University: 6
- Duke University: 6
- Dartmouth College: 7.2
- Brown University: 6
- Vanderbilt University: 8
- Washington University in St. Louis: 7
- Rice University: 5.8
- Cornell University: 9
- University of Notre Dame: 8.9
- Columbia University: 6
- University of California, Berkeley: 20
- University of California, Los Angeles: 18
- Georgetown University: 11
- Emory University: 9
- Carnegie Mellon University: 6
- University of Southern California: 9
- New York University: 8
- University of Virginia: 15
- University of Michigan--Ann Arbor: 15
- University of Florida: 17
- University of North Carolina at Chapel Hill: 16
- Wake Forest University: 10.6
- University of California, Santa Barbara: 17
- Tufts University: 10
- University of California, Irvine: 18
- University of California, San Diego: 19
- Boston College: 10.4
- University of Rochester: 13
- University of California, Davis: 21
- University of Texas at Austin: 18
- University of Wisconsin--Madison: 18
- University of Illinois Urbana-Champaign: 21
- Boston University: 11
- William & Mary: 13
- Georgia Institute of Technology: 21
- Tulane University: 8
- Brandeis University: 10
- Northeastern University: 15
- Case Western Reserve University: 9
- University of Georgia: 17
- The Ohio State University: 18

- 17/50 (34%) of top 50 are public
- **Only two are R2s:** Wake Forest and William & Mary (shown in black)
- W&M has lowest student/faculty ratio among the public universities

Source: USNWR, *Academic Insights* (2023)

TEACHING

Average Teaching Load by School AY21-22

School/Faculty	T/TE	NTE
Arts & Sciences	3.7	7.5
Business	4.5	8.4
Education	3.0	3.9
Law	3.2	4.2
Marine Science	1.5	0.6

- Courses taught by all **active** faculty, i.e., not on leave
- Labs are included
- Independent studies and dissertation credits are not, thus, undercounts occur

A&S Teaching Loads by Area AY21-22

School/Faculty	T/TE	NTE
Arts & Sciences	3.7	7.5
Area I-Arts & Humanities	4.0	7.0
Area II-Social Sciences	3.9	7.1
Area III-Natural Sciences	3.2	9.7

Area I: Art & Art History, Classical Studies, English Language & Literature, Modern Languages & Literature, Music, Philosophy, Religious Studies, Theatre, Speech & Dance
Area II: Anthropology, Economics, Government, History, Kinesiology & Health Science, Military Science, Psychological Sciences, Sociology
Area III: Applied Science, Biology, Chemistry, Computer Science, Geology, Mathematics, Physics

Student Credit Hours/Faculty, R2 Comps

Institution	Faculty*	Undergraduate: 12-month Instructional Credit Hour/Faculty	Graduate: 12 month Instructional Credit Hour/Faculty
William & Mary	**672**	**273**	**70**
American University	812	296	99
Southern Methodist University	723	295	122
Stevens Institute of Technology	308	403	180
University of Dayton	670	382	64
Wake Forest	647	255	94
Worcester Polytechnic Institute	421	432	62

*Does not include adjuncts; Note: Undercounts b/c not all faculty teach in both undergraduate/graduate programs

Source: IPEDS data

T/TE and NTE Student Credit Hours

T/TE and NTE SCH, Over Time
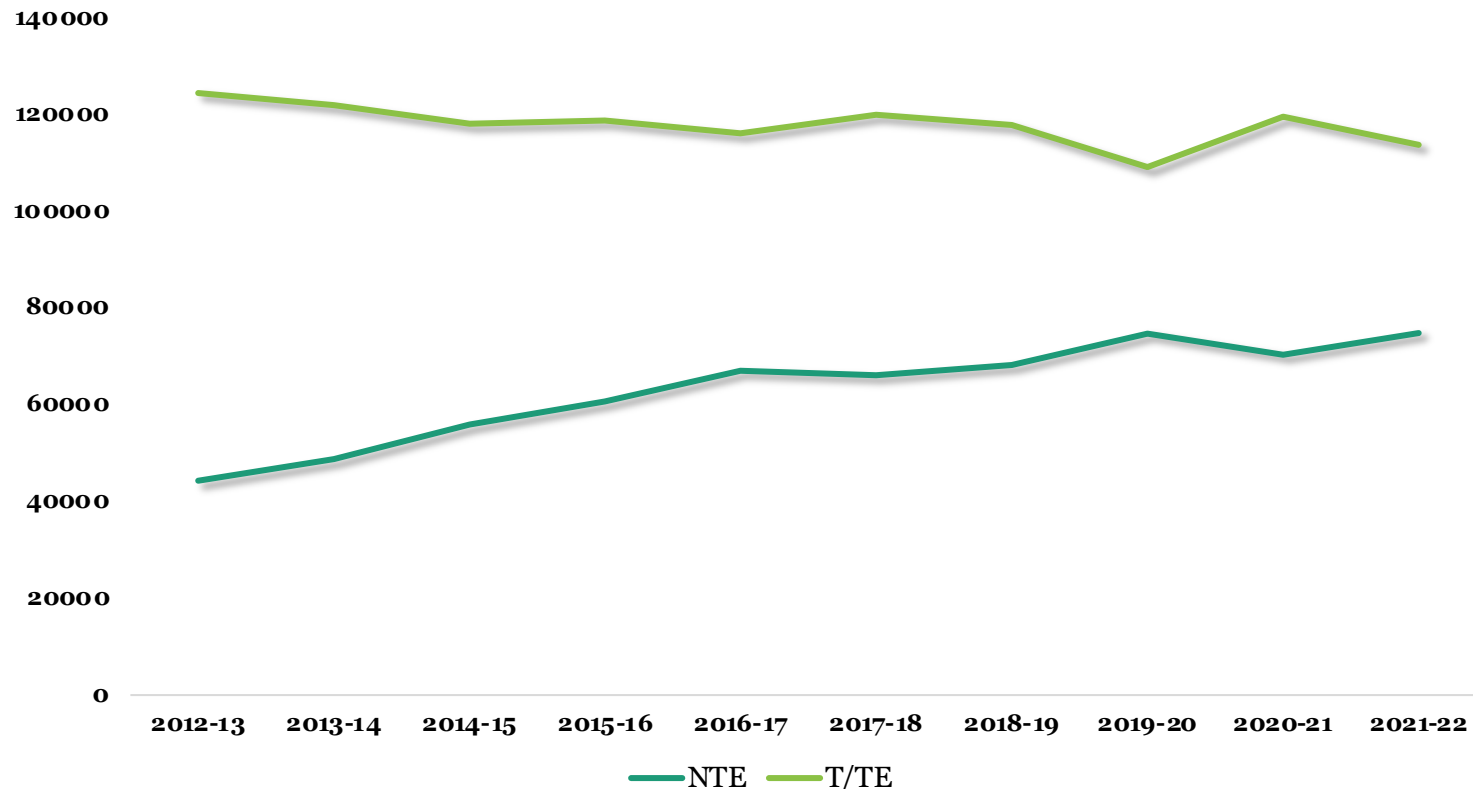
- Credit hours taught by T/TE have been relatively stable

- Credit hours taught by NTE has increased over the decade
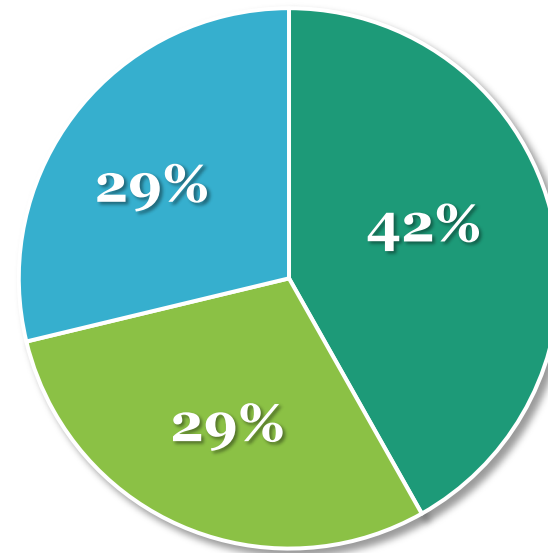
Student Credit Hours Taught By Position AY21-22

No. of Undergrad Student Credit Hours by Position
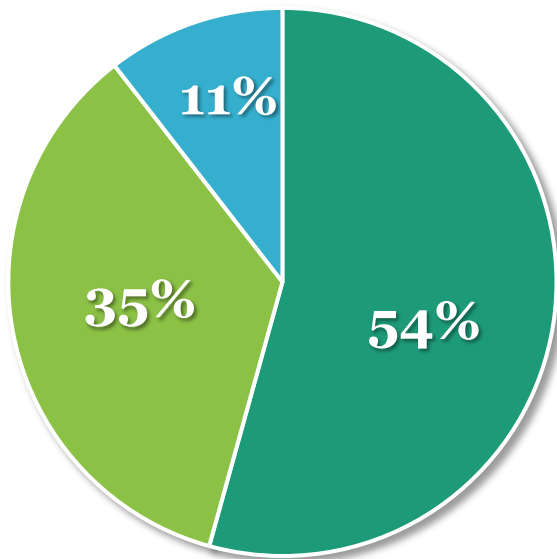
- Tenure-Track
- Non-Tenure Track
- Adjunct

No. of Grad Student Credit Hours by Position

- Tenure-Track
- Non-Tenure Track
- Adjunct

- T/TE faculty teach over half the generated UG student credit hours

- Over half of graduate student credit hours are taught by NTE/Adjunct Faculty, due to healthy growth of online master's programs

Class Sizes Over Time Relatively Stable

Undergraduate Class Size at W&M

—— < 20 students   —— 20-49 students   —— ≥ 50 students
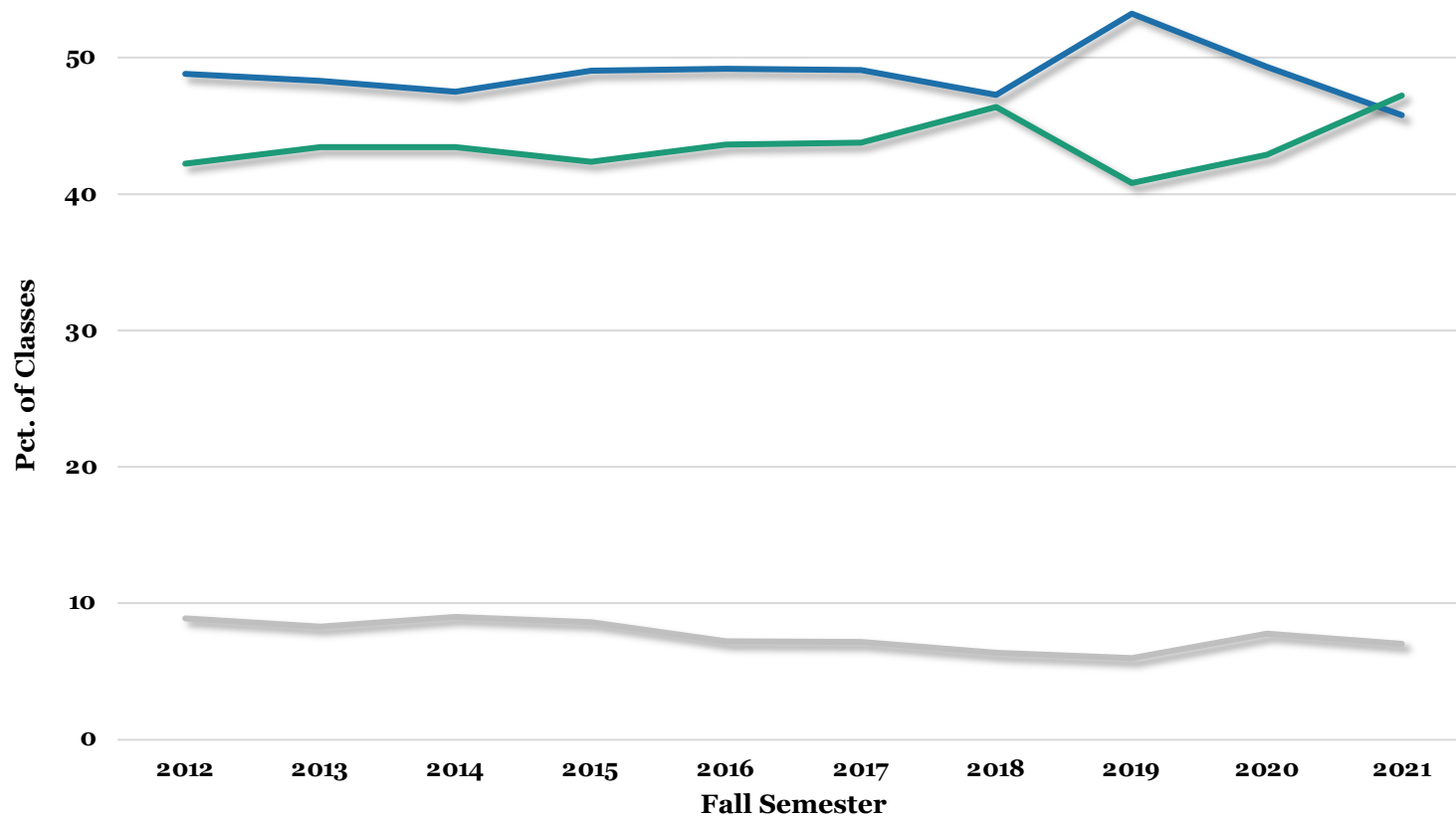
Source: USNWR, Academic Insights

- Convergence of small and mid-size class %

- Large classes have decreased slightly

- 2021: A&S implemented Sustainable Curriculum that reshaped departmental approaches to course scheduling

Assessing Teaching Effectiveness

- **Student evaluations**: Monitored annually
- **Peer observations**: E.g., classroom, syllabus, readings
- **Annual merit evaluation**
- **Outcomes**
  - SOE Praxis Exam: 98% pass rate AY22
  - Law Bar Exam: 100% pass rate AY22
- **Awards recognizing exemplary teaching**:
  - A&S Faculty Award for Teaching Excellence
  - Graves Award for Sustained Excellence in Teaching
  - Thomas Jefferson Teaching Award
  - Class of … William & Mary Student Professorship
  - ΦBK Award for Excellence in Teaching
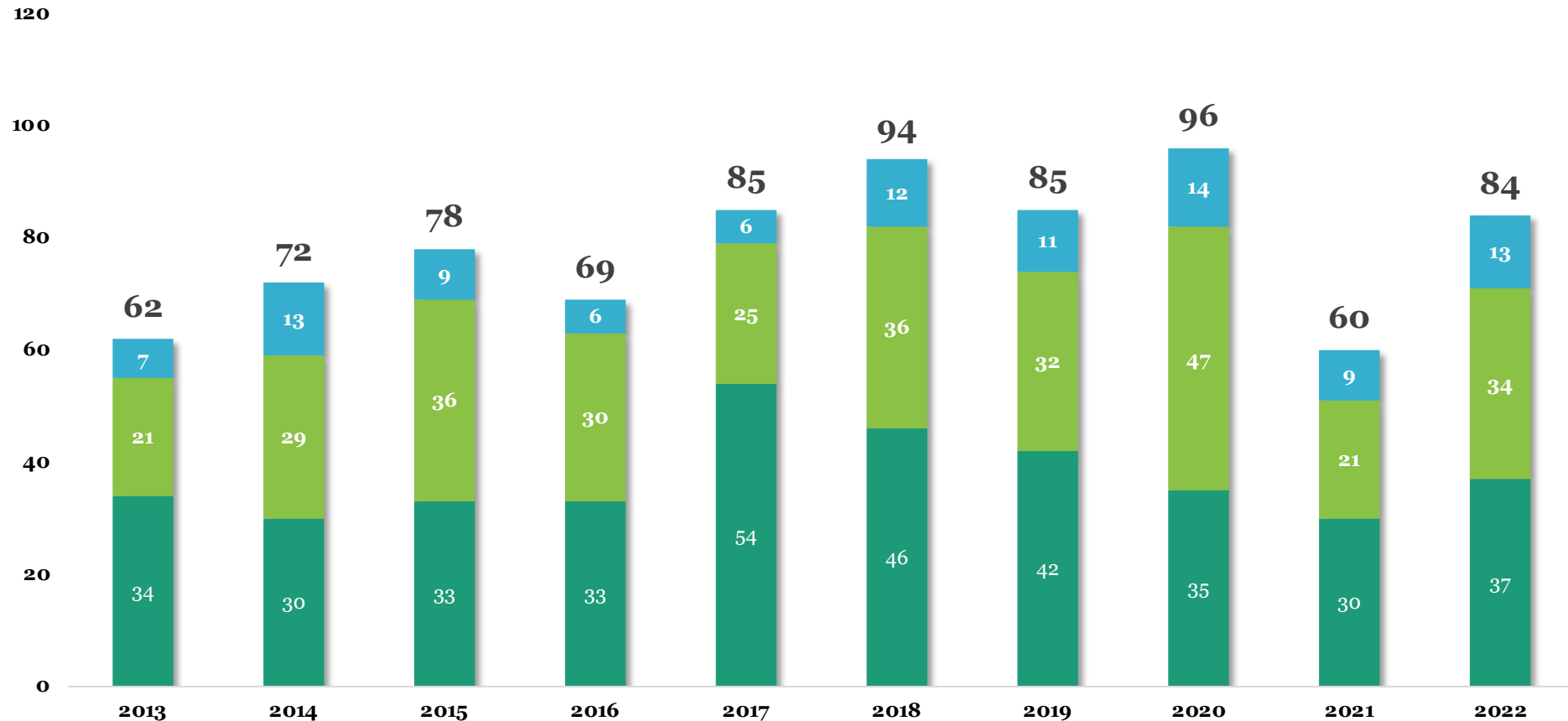
SCHEV Outstanding Faculty Award

W&M faculty have won Outstanding Faculty Awards in 31 out of 37 years – more than any other VA university
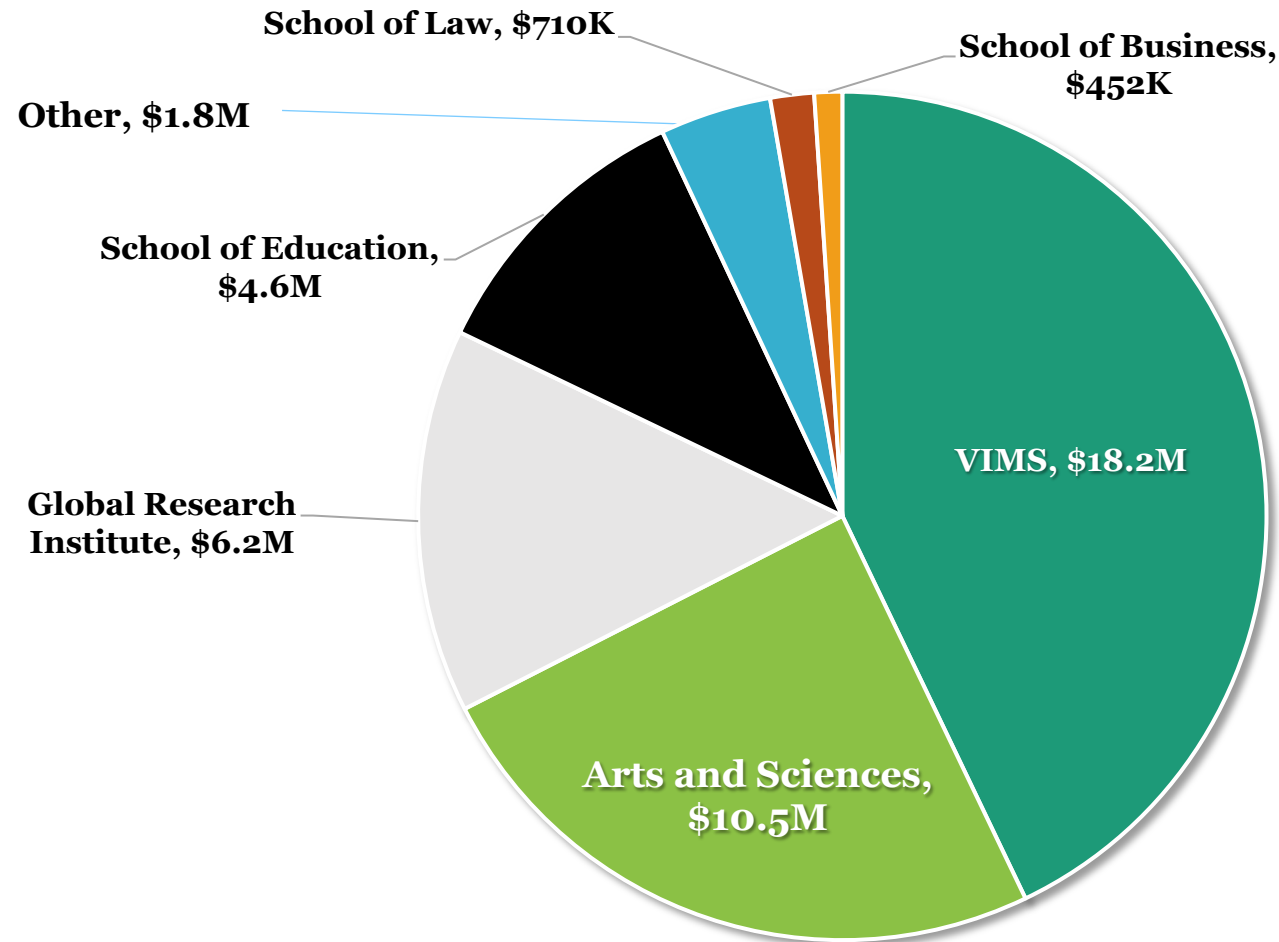
UVA 26, VT 27, ODU 28

Supporting Student Research

Doctorates Awarded by School

■ Arts & Sciences ■ Education ■ VIMS

RESEARCH

Sponsored Expenditures by Unit FY21

School of Law, $710K

School of Business, $452K

Other, $1.8M

School of Education, $4.6M

Global Research Institute, $6.2M
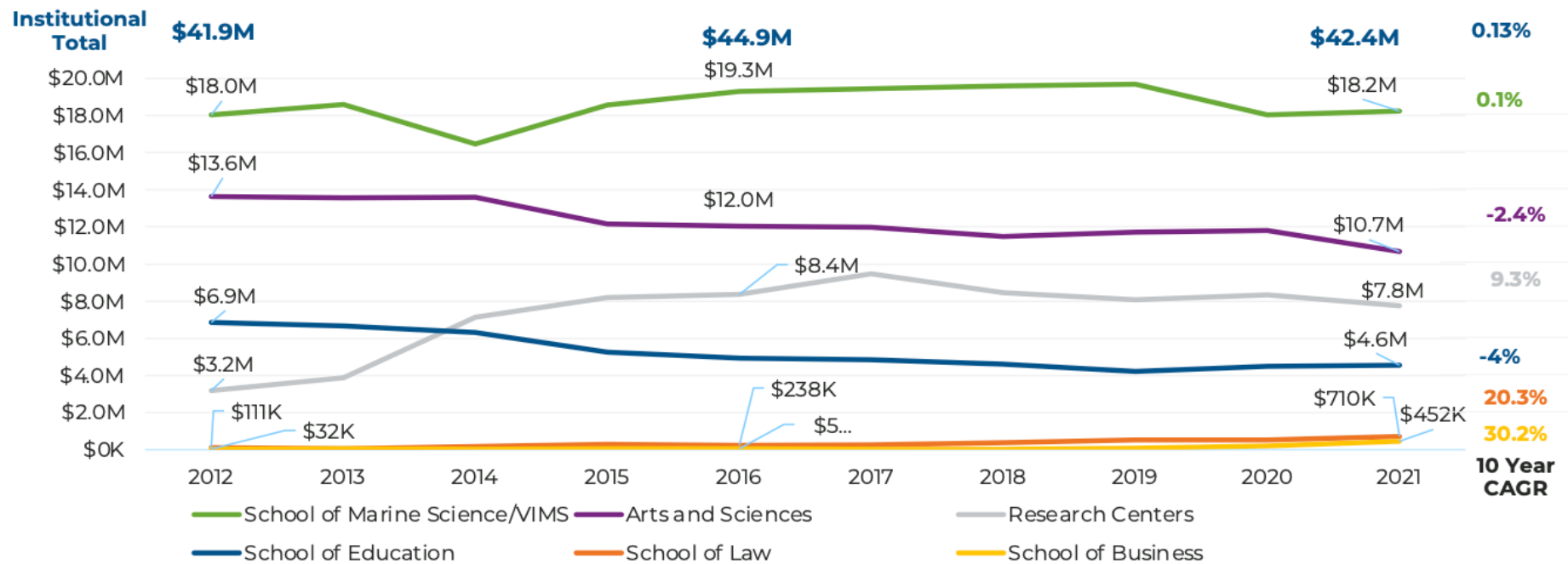
VIMS, $18.2M

Arts and Sciences, $10.5M

- **$42.5M** total expenditures
- A&S, GRI, 4 schools, 42 depts
- VIMS: 43%, A&S: 25%

■ VIMS ■ Arts and Sciences ■ Global Research Institute ■ School of Education ■ Other ■ School of Law ■ School of Business
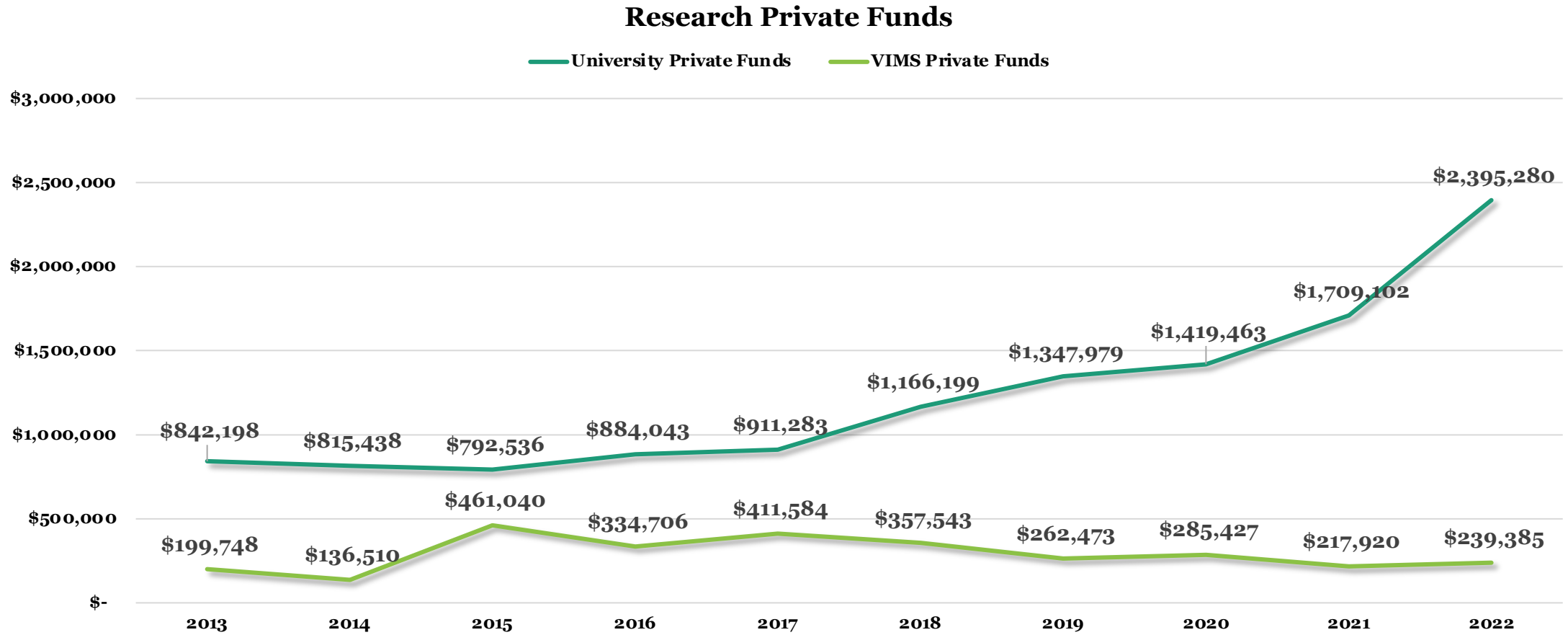
Source: Sponsored Program Expenditures File

Trend Data in Research Expenditures

FY12-21 Sponsored Expenditures by Unit

Sponsored Expenditures growth since FY12 has remained relatively flat, with an overall 10-year growth rate of ~0.13%.

Source: WM FY21 10 Year Sponsored Program by Department Schools

Research Private Funds

Research Private Funds

— University Private Funds   — VIMS Private Funds

University Private Funds:
- 2013: $842,198
- 2014: $815,438
- 2015: $792,536
- 2016: $884,043
- 2017: $911,283
- 2018: $1,166,199
- 2019: $1,347,979
- 2020: $1,419,463
- 2021: $1,709,102
- 2022: $2,395,280

VIMS Private Funds:
- 2013: $199,748
- 2014: $136,510
- 2015: $461,040
- 2016: $334,706
- 2017: $411,584
- 2018: $357,543
- 2019: $262,473
- 2020: $285,427
- 2021: $217,920
- 2022: $239,385

Note: Private funds include donors, foundations, and local funding sources

R&D R2 Comparison, Five-Year Trends

Institution	FY 16			FY 20			'16-'20 Percentage Change	
	Total External Funding	Total Institutional Funding	FY 16 Total	Total External Funding	Total Institutional Funding	FY 20 Total	External Funding	Institutional Funding
William & Mary	**42,518**	**20,509**	**63,027**	**41,221**	**25,542**	**66,763**	**-3%**	**25%**
American University	19,131	37,933	57,064	28,378	43,461	71,839	48%	15%
Southern Methodist University	21,224	10,595	31,819	22,441	20,640	43,081	6%	95%
Stevens Institute of Technology	31,699	4,066	35,765	37,304	7,443	44,747	18%	83%
University of Dayton	113,210	3,379	116,589	161,523	2,195	163,718	43%	-35%
Wake Forest	92,896	77,110	170,006	220,278	24,365	244,643	137%	-68%
Worcester Polytechnic Institute	30,131	7,691	37,822	33,927	9,165	43,092	13%	19%

Examples of Scholarly Productivity

Law

- 30 Law School faculty have published 74 articles in flagship legal journals (top 25 of ~600) in the last 5 years

A&S

Between 2017-2022:

- 391 artistic works
- 2519 articles/chapters
- 54 edited volumes
- 91 books
- 3935 conference presentations, invited talks, seminars
- 39 National Science Foundation CAREER awards, incl. all Computer Science faculty hired since 2004

VIMS

- >50% success rate for federal grants
- High rate of impactful publications (>200 published by faculty in 2021), and national media coverage

SOE

- Journal editors
- Presidents of professional associations
- Lifetime achievement award winners
- Fulbright recipients

Mason

- 195 publications between 2015-2020
- 47.4% were in top 10% of most-cited (SJR)

NEXT STEPS

Phase II

- Systematic capture of "invisible labor"
  - mentoring
  - advising
  - independent studies

- Inventory and analysis of service
  - Internal service
  - External/professional service

- Expand the collection of metrics on publications, artistic endeavors, and presentations
  - Track publications with student co-authors
  - Metrics to highlight faculty effort and impact/influence

- Cross-institutional data sharing
  - Proposals submitted per school and department
  - Externally funded awards and research expenditures

Phase II: Supporting Student Research

- W&M's hallmark is very high levels of undergraduate research:
  - 84% UGs in mentored research
  - 164 UG honors theses in 2022
- Informal and formal, independent and class-based, varying by discipline
- Doctoral dissertations (Ph.D. & Ed.D.)
- **Needed**: Deans and Provost to develop a systematic method for tracking this essential, largely "invisible" labor

- Charles Center funds summer research
- Funds from faculty research grants – undergraduate & grad
- R2 status requires >20 doctoral degrees annually

Phase II: Advising Workload

- Faculty advising is central to the undergraduate experience:
  - All first year and transfer students are assigned a pre-major faculty advisor
  - In A&S, major advisors are selected by students, creating uneven loads
  - Mason faculty advise students along with professional advisors
  - SOE majors have a team of professional (non-faculty) advisors
  - 530 of 680 full-time faculty serve as undergraduate advisors

- **Needed**: Deans to develop systematic method for more evenly distributing this essential, generally "invisible" labor

Provost's Office:

Pamela Eddy, Associate Provost for Faculty Affairs and Development

Dane Pascoe, Data Analyst & Program Administrator

Martha Wescoat-Andes, Senior Associate Provost for Planning & New Ventures

Faculty Assembly:

John Gilmour, President

Scott Swan, Vice President & President-Elect

David Armstrong, Faculty Representative to the BOV

Special thanks to **Jeremy Martin**, Vice President for Strategy & Innovation