

# COST STUDY REPORT

DECEMBER 2022







## ABOUT THIS REPORT

Arizona Revised Statutes section §15-1650.03A requires the Arizona Board of Regents (ABOR) to complete a cost study every five years by December 15. ABOR completed the first cost study in 2017. The intent of the legislation establishing the cost study is to determine the cost of educating a full-time resident undergraduate student at each university. The legislation outlines the following elements to be in the report:

1. The use of instructional fees at each university, including differentiating between mandatory fees, program fees and course fees.
2. Differentiated costs between programs of study, including differential tuition and program and course fees.
3. The costs of faculty and administration differentiated between the amount of time needed to instruct students and to conduct research.
4. A breakdown of where tuition dollars are allocated, including the amount that is not directly attributable to instructional costs.
5. An analysis of the marginal cost and the average cost of a student depending on the type of program in which the student is enrolled, including online programs.

### ABOUT THE ARIZONA BOARD OF REGENTS

The Arizona Board of Regents is committed to ensuring access for qualified residents of Arizona to undergraduate and graduate institutions; promoting the discovery, application, and dissemination of new knowledge; extending the benefits of university activities to Arizona's citizens outside the university; and maximizing the benefits derived from the state's investment in education.

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December 15, 2022



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## APPROACH

For the 2017 cost study, ABOR contracted with Grant Thornton, a national accounting firm to review and validate the process and data reported by each university. The independent review consisted of direct and indirect validation of the process applied and data reported by each university. For this report, ABOR uses the same approach taken in 2017.

Arizona's public universities produce and publish substantial amounts of cost information. To establish a cost per resident student, ABOR uses data that is:

- Based on audited data;
- Consistent across the three public universities;
- Based on clear cost definitions;
- Comparable across time; and
- Comparable with other universities.

As reflected in the 2017 report, this report uses a standard nomenclature for financial accounting and budgeting developed by the National Association of College and University Business Officers (NACUBO): Educational and General Expense (E&G). E&G expenses focus on academic costs and excludes auxiliary (self-supporting enterprises, e.g., residence and dining halls, bookstore, parking, etc.), research, new construction capital costs, plant funds, agency funds and endowments.

E&G expense categories are included in the data collection by the Integrated Postsecondary Education Data System (IPEDS), which is the core postsecondary data collection program for the National Center for Education Statistics (NCES). Using E&G expense as the primary basis for assessing cost per student is consistent across higher education – many institutions utilize E&G expense as the primary measure for assessing costs.

E&G expenses are grouped by the following functional categories:

- Instruction
- Academic support
- Student services
- Institutional support
- Public service
- Scholarships and fellowships (excluding scholarship allowances)
- Operation and maintenance of plant and depreciation

## COST OF EDUCATING A STUDENT

The statute calls for the board to determine the cost of educating a full-time resident undergraduate student at each of the public universities. In actuality, there is no distinction between the cost of educating a resident undergraduate student versus a nonresident undergraduate student. In addition, university expenditures are shared between undergraduate and graduate class levels. While this study excludes the most expensive graduate programs (University of Arizona Colleges of Medicine and Veterinary Medicine), the rest of graduate education is included when estimating average cost. Attempting to separate out graduate program costs would be arbitrary.



UNIVERSITY OPERATING EXPENDITURES BY FUNCTION				
	ASU	NAU	UARIZONA (w/o COM, CVM, AG EXT)	TOTAL
Instruction	\$1,053,721,000	\$148,211,500	\$421,866,000	\$1,623,798,500
Public Service	\$100,908,000	\$24,734,900	\$55,191,000	\$180,833,900
Academic Support	\$392,787,000	\$38,880,400	\$108,731,000	\$540,398,400
Student Services	\$159,384,000	\$56,192,000	\$89,099,000	\$304,675,000
Institutional Support	\$201,507,000	\$71,831,000	\$138,976,000	\$412,314,000
Scholarship/Fellowship	\$300,202,000	\$53,646,200	\$362,588,000	\$716,436,200
Operation and Maintenance of Plant	\$105,823,000	\$22,648,400	\$66,075,000	\$194,546,400
Depreciation	\$152,440,000	\$42,054,500	\$53,536,800	\$248,031,300
Total	\$2,466,772,000	\$458,198,900	\$1,296,062,800	\$4,221,033,700

In addition to excluding the most expensive graduate programs, adjustments to E&G are made to exclude costs that have limited instruction such as public radio/television, The Arizona State Museum and the University of Arizona Cooperative Extension. Also excluded are expenses associated with COVID relief for community-based outreach efforts such as increasing vaccinations and sponsoring vaccination clinics, and overhead and administrative costs related to research, auxiliaries and excluded public service.

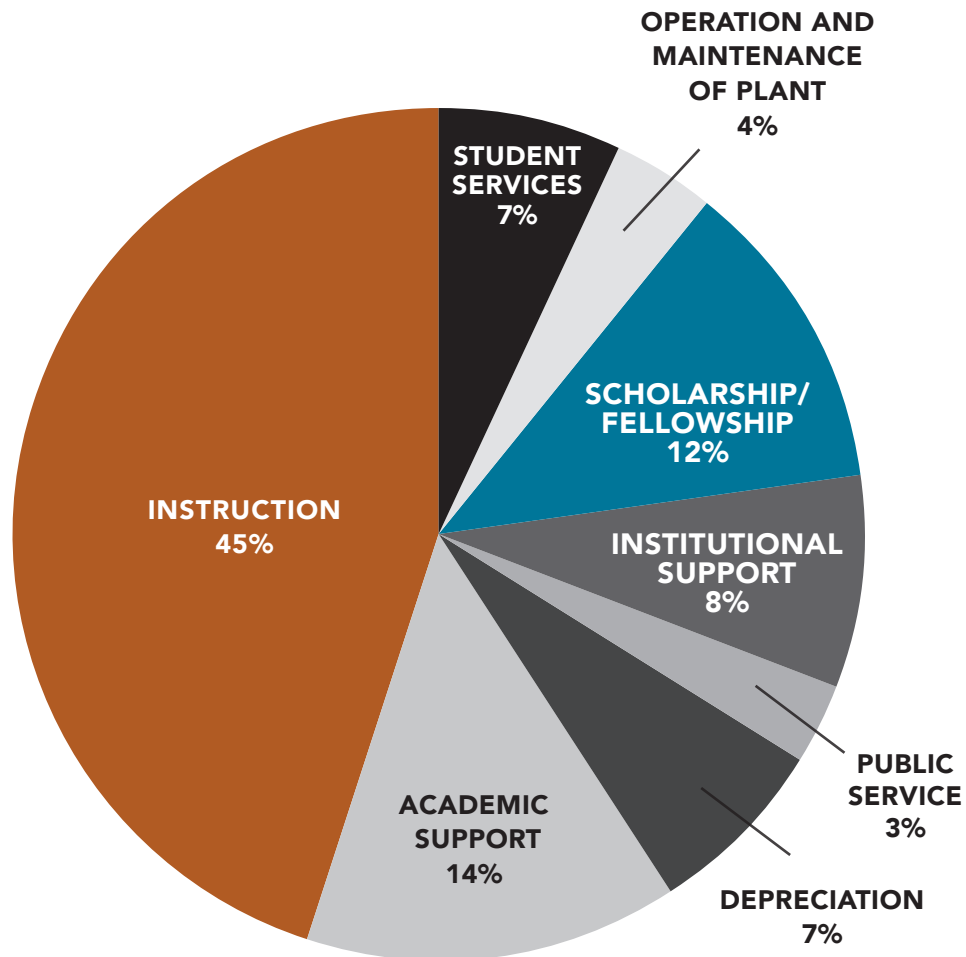
#### CALCULATION OF COST PER STUDENT

The cost per student is calculated by using the adjusted E&G expense divided by full-time equivalent (FTE) student. Student FTE is based on the universities' fall semester 21st day student census. Based on this methodology, the average cost per student for fiscal year 2021 is \$18,855.

COST PER STUDENT				
	ASU	NAU	UARIZONA	TOTAL
Adjusted Education & General Expenses	\$2,338,685,000	\$410,357,750	\$808,508,700	\$3,557,551,450
Student FTE	117,005	28,078	43,597	188,680
Cost per Student	\$19,988	\$14,616	\$18,545	\$18,855

COST PER FTE BY FUNCTION				
	ASU	NAU	UARIZONA (w/o COM, CVM, AG EXT)	TOTAL
Instruction	\$9,006	\$5,279	\$9,142	\$8,483
Academic Support	\$3,357	\$1,385	\$1,979	\$2,599
Student Services	\$1,362	\$2,001	\$1,262	\$1,342
Public Service	\$425	\$404	\$549	\$686
Institutional Support	\$1,291	\$1,913	\$1,639	\$1,464
Scholarship/Fellowship	\$2,566	\$1,911	\$1,961	\$2,328
Operation and Maintenance of Plant	\$678	\$603	\$794	\$694
Depreciation	\$1,303	\$1,120	\$1,228	\$1,258
Total	\$19,888	\$14,616	\$18,545	\$18,855

## COST PER FTE BY FUNCTION



System wide, in real dollars, Arizona public universities are spending at about the same level today than they spent in fiscal year 2016.

	FY 2016	FY 2021
ASU	\$20,088	\$19,988
NAU	\$14,293	\$14,615
UARIZONA	\$18,548	\$18,545



## 1. THE USE OF INSTRUCTIONAL FEES AT EACH UNIVERSITY, INCLUDING DIFFERENTIATING BETWEEN MANDATORY FEES, PROGRAM FEES AND COURSE FEES

Arizona Revised Statutes §15-1626 authorizes ABOR to set tuition and fees. Board policy allows for the establishment of mandatory, program, college and course fees as well as differentiated tuition in an effort to allocate the higher costs associated with various programs, classes and services to specific users. Some fees are the result of student government proposals to supply funding for specific projects initiated by students.

ABOR policy divides fees into two broad categories - mandatory fees and academic fees:

NUMBER OF UNIVERSITY FEES				
	ASU	NAU	UARIZONA	TOTAL
Mandatory Fees	5	8	6	19
College/Program/Differential Tuition	10	55	70	135
Course Fees	508	682	427	1,617
Total	523	745	503	1,771

### MANDATORY FEES

- Mandatory fees are charged to students for a specific purpose, activity or service. Mandatory fees can be university-wide or differentiated by campus location, delivery method, enrollment level or other criteria approved by the board. Examples of mandatory fees include the Arizona Financial Aid Trust fee, technology fees, health services fees, facility fees and recreation fees.

### ACADEMIC FEES

- Fees in this category include differentiated tuition, college fees, program fees, and class or course fees:
  - Differential tuition is tuition that is higher or lower than the published tuition for each university campus or location and applies to all graduate or undergraduate academic programs in a college or school. Examples of differential tuition are freshman and sophomore students in the Polytechnic School and New College at Arizona State University or University of Arizona's College of Nursing.
  - College fees are charged to all undergraduate or graduate students in a college, school or division. The college fee is intended to reflect any added charges for specific programs that have demonstrably higher instructional costs. An example of a college fee at each university is the undergraduate Honor's College fee.

- Program fees are for certain programs within a college with differentiated costs. Most program fees are applied to graduate level programs; however, some undergraduate program fee examples include certain programs within the College of Agriculture and Life Sciences at UArizona, Criminology and Criminal Justice (online) at ASU, and Human Services at NAU.
- Class/course fees: Class or course fees are charged at the individual class level. Fees charged must be used for expenses directly related to the class. Course fees allow the universities to cover expenses that are necessary for successful completion of the class objectives. They cannot be used for general expenses.
- In fiscal year 2021, the universities had 26,596 approved courses in their course bank with 1,617 carrying an approved fee. In any given semester, a university will only offer a subset of the total approved courses. For example, of the 26,596 approved courses in 2020-21, 14,983 courses were offered in fall 2020 with 949 or about six percent having a course fee. Of the 949 course fees, 93 percent of those fees were \$100 or less.

<b>2020-21 COURSE FEES</b>				
FY 2020-21	ASU	NAU	UARIZONA	TOTAL
Courses in Bank	12,266	5,939	8,391	26,596
Number of Courses with Approved Fees	508	682	427	1,617
	4%	11%	5%	6%

<b>FALL 2020 COURSE WITH FEES</b>				
Fall 2020 Courses Offered	6,274	2,492	6,217	14,983
Fall 2020 Courses with Fees	311	330	308	949
Percent of Courses with Fees	5%	13%	5%	6%
Fall 2020 Course Fees Less than \$100	303	300	276	879
Percent of Fall 2020 Courses with Fees Less than \$100	97%	91%	90%	93%

## **FEE REVENUE**

- Academic fees and mandatory fees constitute a small proportion of gross tuition and fee revenue, representing approximately eight percent for academic fees, and four percent for mandatory fees.

## **FEE REFORM**

- Reflecting the board's commitment, to provide greater accessibility and affordability, the board continues to implement fee reforms to improve transparency, simplicity and predictability within the fee-setting process. This includes outlining the purpose and expected benefits to students from fees; strengthening process of student input on academic fees, and the context for the proposed fee in relation to other fees or charges that may be part of a program or other classes.



- The most recent actions by ABOR include:
  - In 2020, the board implemented a plan to review all existing academic fees as part of a sunset process where the board reviews and approves all academic fees at least once every 10 years.
  - In 2022, in its ongoing efforts to provide more stability with regards to tuition, the board approved revamping the entire tuition and fee process, including establishing a multiple-year tuition process and eliminating all course fees to provide more predictability in tuition amounts for students and families. The universities have started these efforts and as of fiscal year 2022 the number of course fees declined to 13 at ASU and in fiscal year 2023 NAU eliminated all undergraduate course fees.

DOLLARS IN 1000'S	ASU	NAU	UARIZONA	TOTAL
<b>Gross Tuition and Fee Revenue</b>	\$2,134,308	\$379,351	\$921,637	\$3,435,296
<b>Academic Fees</b>				
Differential Tuition, College Fee, Program Fee	\$229,125	\$11,479	\$32,730	\$273,333
Course Fees	\$1,035	\$3,251	\$6,979	\$11,265
Total Academic Fees	\$230,160	\$14,730	\$39,709	\$284,598
Academic Fees as % of Gross T&F Revenue	11%	4%	4%	8%
<b>Mandatory Fees</b>				
Total Mandatory Fees	\$44,518	\$28,502	\$50,683	\$123,703
Mandatory Fee as % of Gross T&F Revenue	2%	8%	5%	4%
<b>Total Academic &amp; Mandatory Fee Revenue</b>	\$274,678	\$43,232	\$90,391	\$408,301
Total Fee Revenue as % of Gross Tuition & Fees	13%	11%	10%	12%

## USE BY FUNCTION

	ASU	NAU	UARIZONA
<b>Instruction</b>	The instructional reporting category includes expenditures for all general academic instruction activities for both credit and noncredit courses. Includes remedial and tutorial instruction. The instructional expenditures occur mainly within the colleges. The College of Liberal Arts and Sciences, Fulton Schools of Engineering, and W.P. Carey School of Business account for over 60 percent of instructional expenditures of the combined colleges.	These expenditures include departments or activities related to instruction in NAU's College of Arts and Letters, W.A. Franke College of Business, College of Engineering, Forestry and Natural Sciences, College of Education, College of Social and Behavioral Sciences, and the College of Health and Human Services. The expenditures in the College of Engineering, Forestry and Natural Sciences account for the largest proportion of the total.	These expenditures are for general academic instruction for both credit and non-credit activities. Of the total instruction expenditures, 86 percent of the expenditures occur within the colleges. The colleges of Science, Social & Behavioral Sciences and Eller College of Management account for more than 50 percent of the total instruction expenditures occurring within all colleges. Other units with instruction expenditures include Arizona Online and Distance Education and the Graduate College.
<b>Public Service</b>	Expenditures primarily include all activities providing non-instructional services for individuals and groups external to the institution. These activities include conferences, institutes, clinic services, consultation, advisory services and community-focused service programs. Many public service activities serve an ancillary role to the instructional mission of the institution, as they provide an opportunity for students to observe and participate in activities related to their field of study.	These expenditures include departments or activities such as NAU's teacher development, Gear Up, community focused and sponsored initiatives, and Native American Initiatives. Community-focused experiential learning Rhodes Scholar Program/Gear Up account for over half the expenditures in this program. Non-academic activities are excluded from this study.	Expenditures are primarily for activities or services provided to individuals and groups outside the institution. Of the total public service expenditures, 41 percent occurred within the colleges. Examples include conference, seminar and clinic services provided to the community. Other activities in this category include services provided to the public by Biosphere 2, museums and libraries. Non-academic activities are excluded from this study.
<b>Academic Support</b>	Expenditures that directly support the academic functions of the institution. Expenditures include general academic administration such as Dean's Offices, as well as support directly available to students, including academic technology and support, academic advising, libraries and museums. Over 40 percent of the expenditures occur within colleges, with academic technology and libraries comprising a majority of remaining costs.	Expenditures include departments or activities such as the NAU library, support provided from the Provost's and Deans' Offices and IT support provided directly to academic programs. These three areas comprise over half the expenditures in this program.	Expenditures are for activities and services that support instruction. Of the total, 48 percent is attributable to expenditures within the colleges and are primarily for administrative support activities of the college. Examples include the dean's office and support staff. Other activities within this category are libraries at 13 percent and RII Research Infrastructure at 8 percent.



	ASU	NAU	UARIZONA
<b>Student Services</b>	Expenditures include all student-related activities that support students' emotional and physical well-being and intellectual, cultural and social development outside the context of the formal instruction program, including the Dean of Students, disability resources services, peer mentoring programs, campus health, student recreation and counseling services. This category also includes admissions, registrar and career advising and placement services expenditures. Educational Outreach and Student Services accounts for a majority of the costs in this category.	Expenditures include departments or activities such as the operations in the Admissions Office, the Registrar's Office and the Office of Financial Aid as well as the student programming and services that cover areas from disability resources to peer mentoring programs. Student programming and services in the Student Affairs Department comprise the largest expenditure area in this program, accounting for approximately 25 percent of total expenditures.	Expenditures are for activities outside formal instructional programs that support student emotional and physical well-being and promote student cultural and social development. The majority of these expenditures are incurred by units outside of the colleges such as Enrollment Management, which accounts for 20 percent of the total. Student Success & Retention Innovation accounts for 15 percent of the total. Other expenditures within this category are attributable to units such as Campus Health and Wellness at 7 percent and Campus Recreation at 5 percent.
<b>Institutional Support</b>	Expenditures include support for general administrative costs. Administrative functions include executive management, chief academic officer, general counsel, human resources, research administration, accounting and finance, police, procurement, marketing and media relations, information technology, and risk and liability costs. These costs occur largely within administrative units.	Expenditures include departments or activities such as information technology services and administrative offices including among others the Office of the President, General Council, Comptroller, Audit, Budget, Police and Parking. IT services is the single largest expenditure area in this program, accounting for approximately 25 percent of total expenditures.	Expenditures are for the day-to-day operational support of the institution. Included in this category are expenditures for general administrative services such as University Information Technology Services, which represents 22 percent of the total. Other institutional administrative support functions include Academic Affairs; Executive Office of the President; Legal/General Counsel; Human Resources; Financial Services—Accounting, Payroll, Procurement; Office of Budget and Planning; Research Administration; and Health Sciences Administration. Examples of the types of institutional expenditures include risk and liability insurance, police and safety, regulatory compliance, facilities leases, banking services, and information technology contracts and services.

## 2. DIFFERENTIATED COSTS BETWEEN PROGRAMS OF STUDY, INCLUDING DIFFERENTIAL TUITION AND PROGRAM AND COURSE FEES

Academic structures at Arizona's public universities are complex. Major categories are colleges, institutes, departments and degrees. However, most of the budgeting and cost allocations are organized at the college level. Therefore, for purposes of this cost study, the term "program" is defined at the college level.

The cost per program uses a similar cost-per-FTE method to determine the cost per program, but instead of using functional categories, the program costs are determined by natural classification (or direct costs) with adjustments for overhead and central administration. These adjustments are allocated to each college based on student credit hour. There are 38 defined colleges with 16 at ASU, 7 at NAU and 15 at UArizona (excluding Colleges of Medicine and Veterinary Medicine). When comparing per FTE costs at the college level, the size of the student body associated with a particular college has a skewing effect on the outcomes. For instance, when a new college is set up, there may be start-up costs and fewer students. As the college grows and start-up costs phase out, the cost of the college will normalize.

The tables below list each college with its corresponding enrollment and cost per FTE.

### ASU COST PER COLLEGE

COLLEGE	FTE	COST PER FTE
Integrative Sciences and Arts	8,738	\$16,722
New College	7,324	\$17,165
Public Service & Community Solutions	6,713	\$18,584
Liberal Arts and Sciences	39,262	\$19,080
Design and the Arts	6,929	\$19,227
Journalism	1,798	\$19,428
Health Solutions	4,582	\$19,969
Teachers College	5,910	\$20,383
Engineering	15,354	\$20,545
Business	12,420	\$20,703
Nursing and Health Innovation	2,935	\$21,258
Global Futures	1,357	\$29,996
Barrett Honors College	605	\$34,142
University College	391	\$34,256
Law	1,895	\$36,944
Global Management	792	\$41,822

## NAU COST PER COLLEGE

COLLEGE	FTE	COST PER FTE
Social & Behavioral Sciences	6,883	\$13,789
Forestry, Environment, and Natural Sciences	6,134	\$13,912
Education	3,209	\$14,060
Arts and Letters	3,898	\$15,029
Business	2,729	\$15,112
Health & Human Services	3,613	\$15,946
Engineering, Informatics, and Applied Sciences	1,611	\$17,093

## UARIZONA COST PER COLLEGE

COLLEGE	FTE	COST PER FTE
Optical Sciences	366	\$11,811
Engineering	3,833	\$13,528
Pharmacy	1,408	\$13,871
Management	7,129	\$14,224
Agriculture and Life Sciences	3,733	\$15,648
Architecture Planning & Landscape Architecture	836	\$16,169
Nursing	1,714	\$16,901
Science	8,972	\$18,231
Social & Behavioral Sciences	7,409	\$19,203
Applied Science & Technology	900	\$19,345
Public Health	1,365	\$19,528
Fine Arts	1,823	\$20,430
Education	1,789	\$22,297
Law	907	\$30,249
Humanities	1,414	\$50,484



### 3. THE COSTS OF FACULTY AND ADMINISTRATION DIFFERENTIATED BETWEEN THE AMOUNT OF TIME NEEDED TO INSTRUCT STUDENTS AND TO CONDUCT RESEARCH

Faculty affect the quality of education and are instrumental in achieving the outcomes of ABOR's and the universities' strategic plans. Work expectations for faculty include a variety of activities. They establish curriculum content, set student performance standards, and provide classroom and personal instruction. Faculty members also perform research and through their public service activities make valuable contributions to the community. Costs related to faculty public service and research are generally excluded from this study.

Universities traditionally divide university faculty teaching activities into three distinct areas – organized class sections, thesis/dissertation classes, and individual studies. For organized class sections, class credit hours are typically used as a reasonable proxy for hours of classroom instruction; therefore, a three-credit-hour course is assumed to be three hours of teaching per week. However, a faculty member's time in the classroom represents only a portion of the responsibilities for effectively teaching a course. In addition to direct contact hours there are a variety of other instructional activities related to classroom instruction such as curriculum development, class preparation, grading papers, tests or other assignments, academic advising, answering students' questions outside class, and developing/updating class instructional objectives.

Below is the work-time distribution of faculty of the three universities which generally align with data from the most recent report from the National Center for Education Statistics (Digest of Education Statistics 2019<sup>1</sup>), for public research universities.

	ASU	NAU	UARIZONA
Teaching	40%	50%	40%
Research & Scholarship	40%	30%	40%
Other Activities - Administrative Duties, Personal Growth/Professional Development, Service	20%	20%	20%

Board policy names six broad categories of faculty rankings. Faculty are employees whose Notice of Appointment is Professor (Tenured/Tenure Track), Associate Professor (T/TT), Assistant Professor (T, TT), Lecturer (senior and principal), Instructor, and faculty without a rank.

<sup>1</sup> Digest of Education Statistics 2019 (Table 315.30). National Center for Education Statistics [https://nces.ed.gov/programs/digest/d19/tables/dt19\\_315.30.asp](https://nces.ed.gov/programs/digest/d19/tables/dt19_315.30.asp)

Below is a breakdown of each university's FTE faculty by rank:

FACULTY TYPE	ASU	NAU	UARIZONA	TOTAL
Professor	994	282	866	2,142
Associate Professor	824	217	682	1,723
Assistant Professor	791	272	537	1,600
Lecturers	419	220	229	868
Instructors	580	7	124	711
Faculty-No Rank	377	481	198	1,056
Total	3,985	1,479	2,637	8,101

The following is a general definition and explanation of work expectations for different faculty types:

- **Professor (Full, Associate, and Assistant):** Professors are categorized by three ranks: full, associate and assistant. All levels of professors serve in one or more of the three principal university functions - instruction, research and public service. Further, professors will be appointed into a tenured or tenure-eligible position; or on a fixed-term basis, to a practicing, research or clinical position. Specific duties and work expectations may vary between instruction, research and public service depending on the type of appointment and the specific expertise of the professor and the needs of the university.
- **Lecturers:** Lecturers are appointed on a fixed-term basis, primarily to provide student instruction. They may also hold teaching service responsibilities, including supervision of supplemental student learning, professional development and/or administrative duties related to teaching.
- **Instructors:** Instructors are appointed on an annual, fixed-term basis and generally focus on student instruction. They may have limited service and/or professional development responsibilities.
- **No-rank:** Faculty without a rank include faculty appointed on a fixed term basis who do not carry one of the five ranks noted above. Generally, they are appointed to provide student instruction or research support.

Depending on the role assigned, faculty may also include the president, provost, vice provosts, deans, directors, associate deans, assistant deans and executive officers of academic departments (chairpersons, heads or the equivalent) if their principal activity is instruction combined with research and/or public service.

Below are faculty salary expenses for FY 2021<sup>2</sup>.

\$ in Thousands	ASU	NAU	UARIZONA	TOTAL
Faculty Salary Expense	\$525,837	\$76,652	\$327,280	\$929,769
Faculty Salaries as % total university salaries	47%	38%	39%	43%

<sup>2</sup> Arizona Board of Regents. (2021). Annual Cost Containment Report. <https://www.azregents.edu/sites/default/files/reports/cost-containment-2021.pdf>

## ADMINISTRATIVE COSTS

For this study, administrative costs or overhead is defined as actual Operation and Maintenance and Institutional Support expenditures.

Beginning in the 2016-17 collection year, NACUBO and IPEDS no longer report O&M and depreciation as separate functional expense categories. These two functional categories now are distributed among instruction, public service, academic support, student services, institutional support, and research. In order to maintain consistency across institutions, NACUBO provides methods for allocating O&M and depreciation among these other functions. Some of NACUBO common recommended methodologies include:

- Direct assignment based on functional category of space
- Assignable square footage
- Salaries (and wages), or salaries (and wages) plus benefits
- Total expenses by function
- Combination of the above

For this report overhead costs are distributed to the various areas based on total expenditures in that functional category.

## ALLOCATION OF OVERHEAD

	ASU	NAU	UA
Academic	75%	75%	61%
Research	17%	11%	30%
Auxiliary	8%	14%	9%
Total	100%	100%	100%



#### 4. A BREAKDOWN OF WHERE TUITION DOLLARS ARE ALLOCATED, INCLUDING THE AMOUNT THAT IS NOT DIRECTLY ATTRIBUTABLE TO INSTRUCTIONAL COSTS

As part of the annual state budget submittal to the governor and Legislature, the universities track and report revenues and expenditures for various funds, including tuition and fees. State budget guidelines require the universities to separate tuition and fee revenues into two funding types - appropriated tuition and fees (collections fund), which are funds allocated by the Legislature to support the state budget and non-appropriated tuition and fees retained by each university to support local budgets.

Below are tuition and fee operating expenditures for fiscal year 2021:

##### ASU

FY 2021 USES OF TUITION AND FEES			
	Appropriated	Non-Appropriated	Total
Instruction	290,915.7	485,831.6	776,747.3
Organized Research	13,376.2	268.9	13,645.1
Public Service	3,012.7	-132.8	2,879.9
Academic Support	103,246.4	131,306.0	234,552.4
Student Services	48,105.8	586,797.2	634,903.0
Institutional Support	144,455.2	262,089.4	406,544.6
<b>Total</b>	<b>603,112.0</b>	<b>1,466,160.3</b>	<b>2,069,272.3</b>
Expenditure Categories	Appropriated	Non-Appropriated	Total
Personal Services	387,120.3	277,133.3	664,253.6
Employee Related Expenses	110,490.3	90,177.0	200,667.3
Prof. and Outside Services	43,482.1	282,924.0	326,406.1
Travel - In State	12.0	33.1	45.1
Travel - Out of State	70.1	2,551.9	2,622.0
Food	11,401.2	556.3	11,957.5
Aid to Organizations and Individuals	0.0	531,792.0	531,792.0
Other Operating Expenses	48,463.9	148,469.9	196,933.8
Equipment	2,072.1	6,023.5	8,095.6
Capital Outlay	0.0	0.0	0.0
Debt Service	0.0	0.0	0.0
Cost Allocation	0.0	0.0	0.0
Transfers		126,499.3	126,499.3
<b>Total</b>	<b>603,112.0</b>	<b>1,466,160.3</b>	<b>2,069,272.3</b>

## NAU

FY 2021 USES OF TUITION AND FEES			
	Appropriated	Non-Appropriated	Total
Instruction	33,247.1	36,243.9	69,491.0
Organized Research	7,027.9	0.0	7,027.9
Public Service	2,270.8	26.6	2,297.4
Academic Support	27,133.7	-168.4	26,965.3
Student Services	10,790.2	87,572.4	98,362.6
Institutional Support	58,451.6	576.0	59,027.6
<b>Total</b>	<b>138,921.3</b>	<b>124,250.5</b>	<b>263,171.8</b>
Expenditure Categories	Appropriated	Non-Appropriated	Total
Personal Services	81,374.4	12,990.5	94,364.9
Employee Related Expenses	27,817.4	3,183.8	31,001.2
Prof. And Outside Services	7,814.3	8,137.9	15,952.2
Travel - In State	24.1	54.8	78.9
Travel - Out of State	5.8	0.0	5.8
Food	0.0	0.0	0.0
Aid to Organizations and Individuals	1,667.4	0.0	1,667.4
Other Operating Expenses	20,115.9	7,627.6	27,743.5
Equipment	102.0	179.5	281.5
Capital Outlay	0.0	0.0	0.0
Debt Service	0.0	0.0	0.0
Cost Allocation	0.0	0.0	0.0
Transfers	0.0	92,076.4	92,076.4
<b>Total</b>	<b>138,921.3</b>	<b>124,250.5</b>	<b>263,171.8</b>

## UARIZONA

FY 2021 USES OF TUITION AND FEES			
	Appropriated	Non-Appropriated	Total
Instruction	111,416.8	66,743.5	178,160.3
Organized Research	30,683.6	-5.5	30,678.1
Public Service	2,438.2	30.3	2,468.5
Academic Support	68,721.6	47,153.4	115,875.0
Student Services	4,686.3	47,193.1	51,879.4
Institutional Support	136,240.5	264,515.3	400,755.8
Agriculture	12,526.2	3,742.1	16,268.3
U of A South	1,584.2	8,427.3	10,011.5
<b>Total</b>	<b>368,297.4</b>	<b>437,799.5</b>	<b>806,096.9</b>
Expenditure Categories	Appropriated	Non-Appropriated	Total
Personal Services	223,721.9	88,307.9	312,029.8
Employee Related Expenses	73,054.9	46,257.7	119,312.6
Prof. And Outside Services	9,542.3	12,591.2	22,133.5
Travel - In State	17.4	28.3	45.7
Travel - Out of State	38.0	6.6	44.6
Food	7,372.8	8,037.2	15,410.0
Aid to Organizations and Individuals		0.0	0.0
Other Operating Expenses	45,666.2	277,959.8	323,626.0
Equipment	1,988.0	434.3	2,422.3
Capital Outlay	6,895.9	5.6	6,901.5
Debt Service			0.0
Cost Allocation			0.0
Transfers		4,170.9	4,170.9
<b>Total</b>	<b>368,297.4</b>	<b>437,799.5</b>	<b>806,096.9</b>

Note: This schedule includes Cooperative Extension and College of Veterinary Medicine which have been excluded elsewhere in this report, as these expenses are not differentiated in the legislative budget.

## UARIZONA HEALTH SCIENCES CENTER

FY 2021 USES OF TUITION AND FEES			
	Appropriated	Non-Appropriated	Total
Instruction	2,263.4	26,448.5	28,711.9
Organized Research	4,102.1	0.0	4,102.1
Public Service	499.5	0.6	500.1
Academic Support	18,080.7	44.9	18,125.6
Student Services	2,695.3	-80.7	2,614.6
Institutional Support	5,059.2	0.0	5,059.2
College of Medicine	4,073.5	211.5	4,285.0
<b>Total</b>	<b>36,773.7</b>	<b>26,624.8</b>	<b>63,398.5</b>
Expenditure Categories	Appropriated	Non-Appropriated	Total
Personal Services	22,103.9	16,666.0	38,769.9
Employee Related Expenses	6,829.9	5,051.8	11,881.7
Prof. And Outside Services	4,204.9	1,089.2	5,294.1
Travel - In State	2.1	5.8	7.9
Travel - Out of State	0.5	2.0	2.5
Food	0.0	0.0	0.0
Aid to Organizations and Individuals	0.0	0.0	0.0
Other Operating Expenses	2,017.5	5,663.3	7,680.8
Equipment	14.9	76.6	91.5
Capital Outlay	1,600.0	0.0	1,600.0
Debt Service		0.0	0.0
Cost Allocation		0.0	0.0
Transfers		-1,929.9	-1,929.9
<b>Total</b>	<b>36,773.7</b>	<b>26,624.8</b>	<b>63,398.5</b>

Note: This schedule includes College of Medicine expenditures which have been excluded elsewhere in this report, as these expenses are not differentiated from other health-related programs within the Health Sciences Center in the legislative budget.



## 5. AN ANALYSIS OF THE MARGINAL COST AND THE AVERAGE COST OF A STUDENT DEPENDING ON THE TYPE OF PROGRAM IN WHICH THE STUDENT IS ENROLLED, INCLUDING ONLINE PROGRAMS

### MARGINAL COSTS

Marginal costs are difficult to calculate. The costs of adding one more student may have a marginal cost of zero; however, as additional students are added, the marginal costs can grow until eventually, marginal cost equals the average per FTE cost. Attempting to decide the point at which marginal costs equal average costs would require defining costs as variable or fixed. Certain costs such as plant, utility and administrative costs are assumed to be fixed for a number of new students, while other costs such as advising or instruction would be variable. As students are added, more and more costs move from fixed to variable until ultimately all costs become variable. For these reasons it makes more sense to calculate average costs across programs as shown earlier in this report.

### ONLINE COSTS

Online education is not an isolated activity at the university, but an integrated educational delivery system embedded in each college. Often the same professors who are teaching on-campus classes are developing and delivering the online content. Further, the majority of on-campus students take at least some of their programming in an online format. Because of this integrated approach to online content delivery between online programs and on-campus programs, there are many shared costs. The cost of online education is also determined by the different approaches and technologies that impact cost. One course may stream videos of lectures while another may have more student participation and interaction.

There is an expectation that online courses will be cheaper to offer than traditional face-to-face because of the expanded class size made possible, and the reduced labor costs as a result, but there are costs of online courses not shared with face-to-face instruction, such as technology required to administer these courses. Some costs may go down in online courses, while others go up to offset any purported savings.

For purposes of this study, online costs include both direct and indirect costs. Direct costs include the enrollment center, third-party payments or hosting, data management, web design, course development, marketing, academic support and indirect costs, including allocation for central staff supporting online admissions, financial aid, student, billing and information technology. As with the system calculation of E&G, there is no distinction between the cost of educating a resident undergraduate online student versus a nonresident undergraduate online student.



Using direct and indirect costs, the calculated Education and General Expense (E&G) for online is:

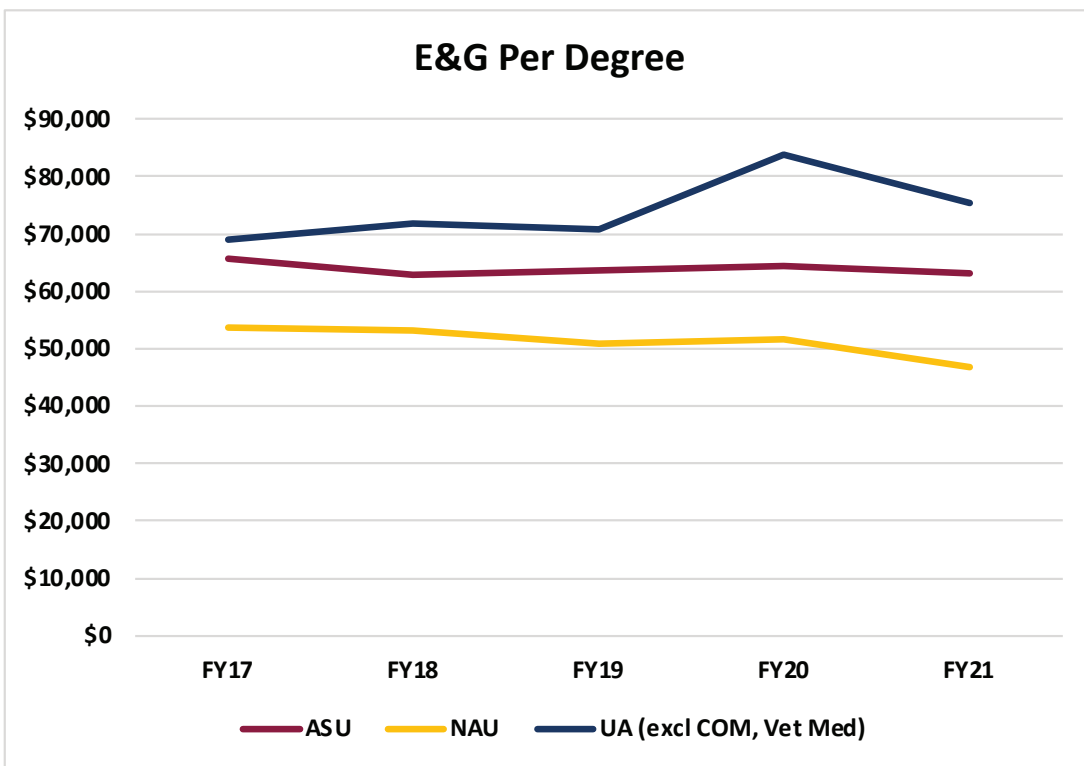
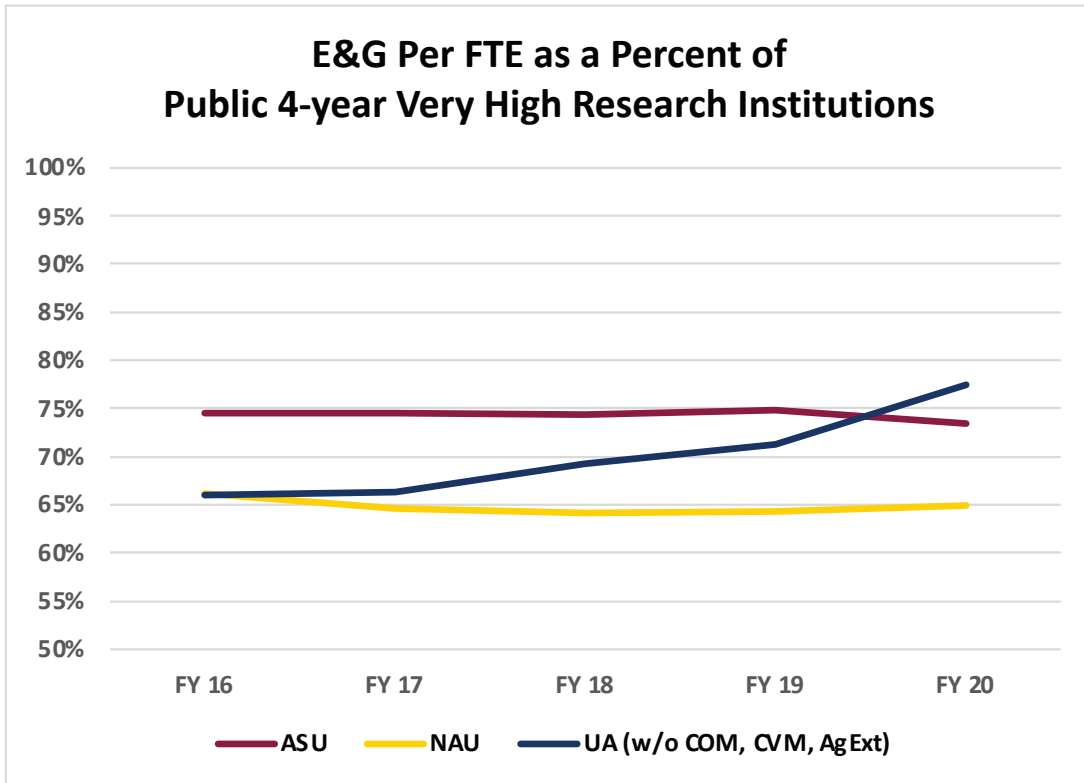
<b>ONLINE E&amp;G PER STUDENT - FY 2021</b>				
Expense Category	ASU	NAU	UARIZONA	TOTAL
Institutional Financial Aid (tuition funded)	\$100,810,288	\$3,300,000	\$5,125,000	\$109,235,288
Student Instructional Costs	\$119,383,519	\$26,000,000	\$52,091,500	\$197,475,019
Direct Operations	\$307,389,325	\$10,700,000	\$23,972,000	\$342,061,325
Indirect Operations	\$25,879,070	\$6,000,000	\$1,836,300	\$33,715,370
Total Expenses (\$1000's)	\$553,462,201	\$46,000,000	\$83,024,800	\$682,487,001
Online FTE	36,924	3,548	4,224	44,695
Online E&G per Student	\$14,989	\$12,965	\$19,656	\$15,270
University E&G	\$19,988	\$14,616	\$18,545	\$18,855
Online E&G per Student	\$14,989	\$12,965	\$19,656	\$15,270
Online as % of total E&G	75%	89%	106%	81%

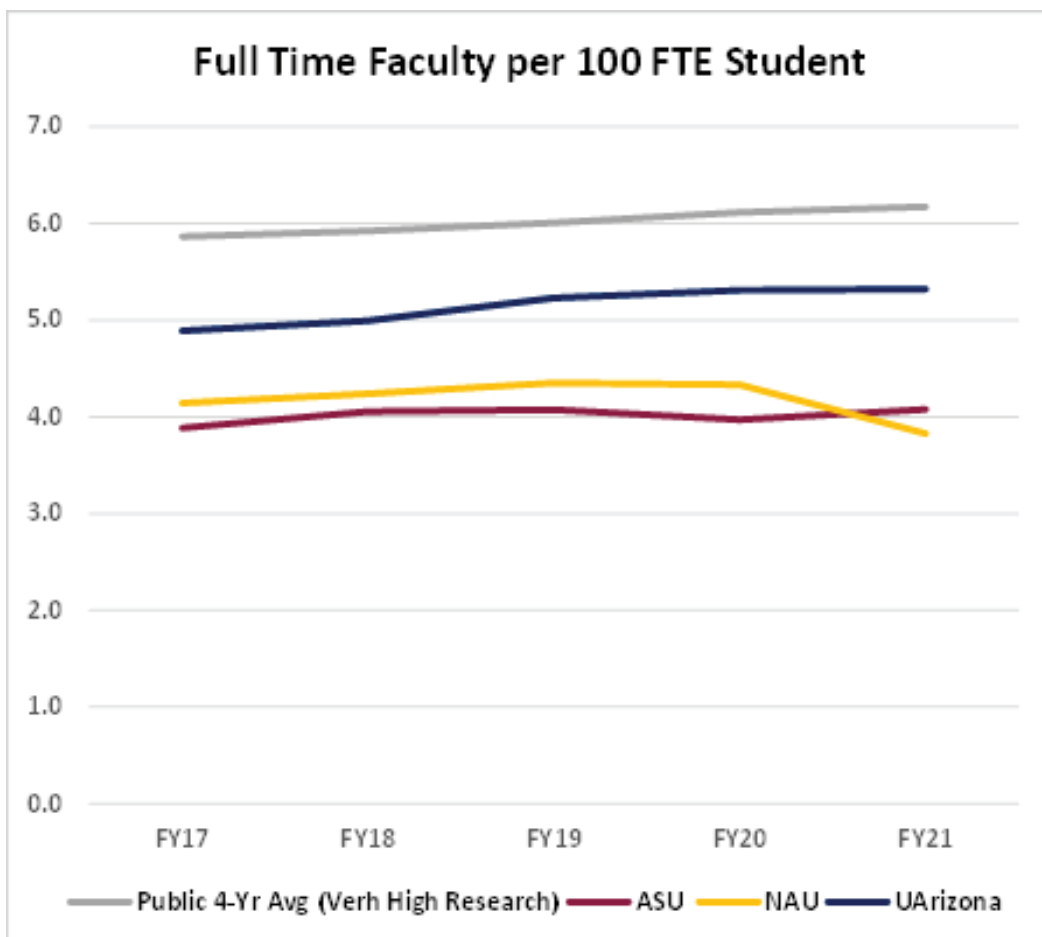
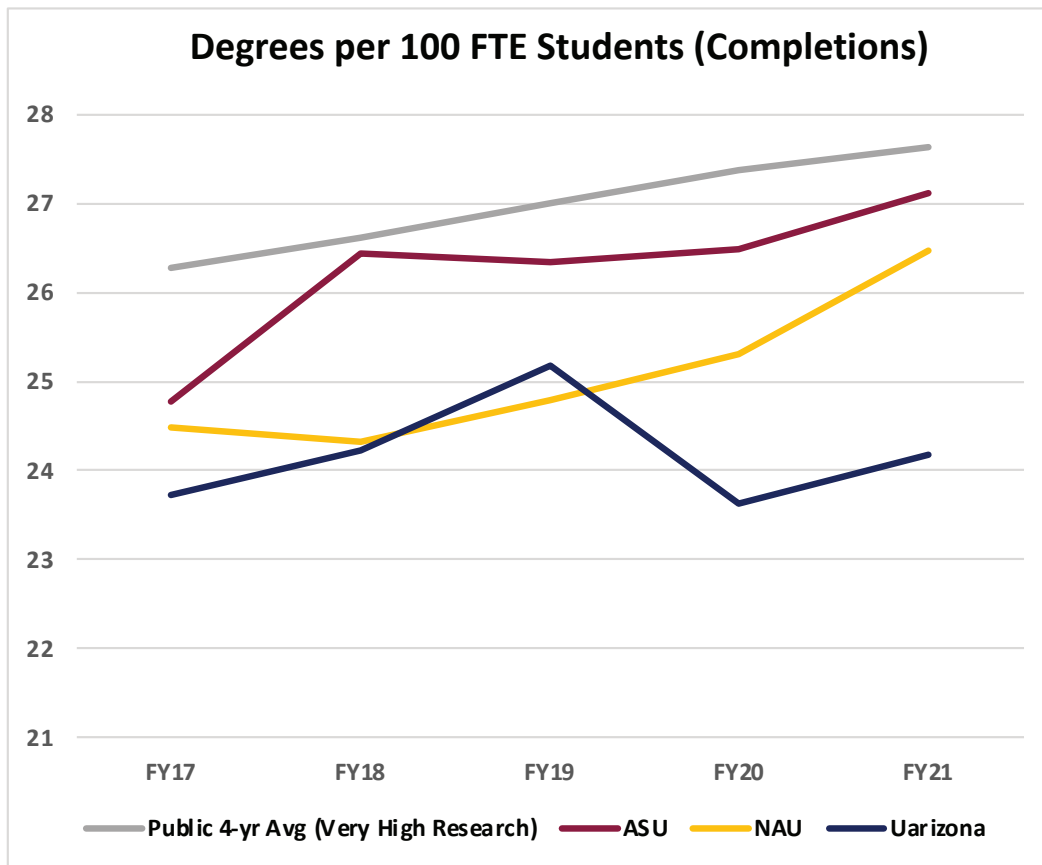
Compared to the system E&G, online E&G is approximately 81 percent. In other words, online costs are about 20 percent less than overall costs per student.

For fall 2020, 44,695 of 190,601 FTE students or about 23 percent were strictly online students. For resident students, 10,614 or 10 percent of all resident students were online students.

<b>ONLINE ENROLLMENT</b>				
Student FTE Fall 2020	ASU	NAU	UARIZONA	TOTAL
Resident - Immersion	52,634	16,390	26,741	95,765
Resident Online	7,200	2,175	1,239	10,614
Total Resident	59,834	18,565	27,980	106,379
% of Res Online	12%	12%	4%	10%
Nonresident - Immersion	27,449	8,140	14,552	50,141
Nonresident Online	29,724	1,373	2,985	34,082
Total Nonresident	57,172	9,513	17,537	84,222
% of NR Online	52%	14%	17%	40%
Total FTE Enrollment	117,006	28,078	45,517	190,601
Total Online	36,924	3,548	4,224	44,695
% of Online	32%	13%	9%	23%

## APPENDIX





## FUNCTIONAL EXPENSE CATEGORIES:

**Instruction:** This category includes all activities that are part of an institution's instructional program. Expenditures include all general academic instruction activities for both credit and noncredit courses. It includes remedial and tutorial instruction and vocational instruction (if offered).

**Public Service:** Public service expenditures primarily include activities providing non-instructional services for individuals and groups external to the institution. These activities include conferences, institutes, clinic services, consultation, advisory services and community-focused service programs. Many public service activities serve an ancillary role to the instructional mission of the institution, as they provide an opportunity for students to observe and participate in activities related to their field of study. (The non-instructional component of this category is excluded in this study, which include cooperative extension services and public broadcasting services).

**Academic Support:** Academic support services are an integral part of the institution's primary mission of instruction, research or public service and are not charged directly to these primary programs. Expenses for academic support include expenses for libraries, museums, galleries, audio/visual services, academic development, academic computing support, course and curriculum development, and academic administration.

**Student Services:** Student services expenditures are all student-related activities that support students' emotional and physical well-being and intellectual, cultural and social development outside the context of the formal instruction program. Examples include admissions and registrar activities, disability resources services, peer mentoring programs, campus health, career guidance, counseling, financial aid administration, student records, career advising and placement services.

**Institutional Support:** Institutional support includes expenses for the day-to-day operational support of the institution. Included are expenses for general administrative services, executive direction and planning, legal and fiscal operations, administrative computing support and information technology, marketing and media relations, human resources, public safety, procurement, and risk and liability costs.

**Scholarships and Fellowships:** The scholarships and fellowships classification include expenses for scholarships and fellowships—from restricted or unrestricted funds—in the form of grants that neither require the student to perform service to the institution as consideration for the grant, nor require the student to repay the amount of the grant to the funding source.

**Operation and Maintenance of Plant and Depreciation:** Beginning in the 2016-17 collection year, NACUBO and IPEDS no longer report O&M and depreciation as separate functional expense categories. Total O&M and depreciation expenses now are distributed among instruction, public service, academic support, student services, institutional support and research. In order to maintain consistency across institutions, NACUBO provides methods for allocating O&M and depreciation among these other functions.

