

SOUTH CAROLINA COMMISSION ON HIGHER EDUCATION
1983-84 APPROPRIATION FORMULA
FOR CONTINUING OPERATIONS

The Appropriation Formula provides for equitable sharing of state taxpayer support for South Carolina's public colleges and universities. Realistic appropriations are computed impartially by using actual enrollments, proven student/faculty ratios, uniform salary assumptions, and justifiable average percentages to cover the agreed programs (instruction, research, public service, etc.) of the institutions.

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1. STUDENT CREDIT HOURS

Use the number of student credit hours produced, by level of instruction and academic discipline, during the fall 1982 semester. Include half credit for contact hours in physical education and remedial courses unless credit hours toward a degree are awarded for such courses. (See CHE Report 14)

2. FTE (FULL-TIME EQUIVALENT) STUDENTS

Divide undergraduate credit hours by	15
professional (law) " " "	15
master's level " " "	12
and doctoral " " "	9

to determine the number of FTE students to be taught. (See CHE Report 3)

NOTE

From Table 1 determine the appropriate Academic Discipline Table 2, 3, or 4 to be used in calculating steps 3, 4a, and 4b for your institution.

3. FTE TEACHING FACULTY

To find the number of FTE teaching faculty positions required, divide the number of FTE students at each level and in each academic discipline by an appropriate student/faculty ratio.

4. INSTRUCTION

- a. Compute the cost of teaching faculty salaries by multiplying the FTE teaching faculty by peer group faculty salary average for each discipline and level.
- b. Multiply the cost of teaching faculty salaries for each discipline and level by the corresponding peer group instructional support percentage to obtain total cost for instructional support.
- c. add a and b.

d. Of the total number of FTE teaching faculty (other than military science) required, determine the proportion to be filled by teaching assistants. (Use the proportion on fall 1981 CHE Report 9, unless justification for a different proportion is presented.) Multiply the number of FTE teaching assistants required by \$X,XXX (difference between average salary of faculty other than teaching assistants and average salary of teaching assistants for fall 1981 for your institution), plus improvements of ___% for 1982-83. (See CHE Report 10)

e. The difference between 4c and 4d equals total costs for instruction.

5. RESEARCH

25% of prior year sponsored research and non-general fund research expenditures at your institution equals total costs for research.

6. PUBLIC SERVICE

25% of prior year sponsored public service and non-general fund public service expenditures at your institution equals total costs for public service.

7. ACADEMIC SUPPORT - LIBRARIES

10% of total instructional costs (as determined in step 4e) to cover library acquisitions and operations equals total costs for academic support - libraries.

8. ACADEMIC SUPPORT - OTHER

12% of total instructional costs (as determined in step 4e) to cover museums and galleries, educational media services, academic computing support, ancillary support, academic administration, and academic personnel development equals total costs for academic support - other.

9. STUDENT SERVICES

\$150 - 1st 4,000 headcount students, \$125 - 2nd 4,000 headcount students, \$100 - 3rd 4,000 headcount students, \$75 - all over 12,000 headcount students enrolled fall 1982, plus \$4 per student credit hour as determined in step 1 equals total costs for student services.

10. OPERATION AND MAINTENANCE OF PLANT

a. For physical plant general services, use formula I, Table 5.

b. For building maintenance, use formula II, Table 5.

c. For custodial services, use formula III, Table 5.

d. For grounds maintenance, use formula IV, Table 5.

e. Add the actual 1980-81 expenditures for utilities (see Table 6 for definitions) plus 7% per year (14 % for natural gas).

- f. The sum of 10a through 10e equals total costs for operation and maintenance of plant.

11. INSTITUTIONAL SUPPORT

- a. Sub-total steps 4e, 5, 6, 7, 8, 9, and 10.
- b. 15% of this total or \$50,000 (whichever is larger) equals total costs for institutional support.

12. UNIQUE COSTS

Funding to provide for unique costs and to respond to differences which exist among institutions because of different roles and missions, which are not provided for in previous steps, may be requested. Items included should be of such nature as to require subjective analysis and judgment. When requests for such items are included, they must be subjectively justified (to include how the item is unique, special or not included in previous components of the formula) and specific amounts of costs by program must be detailed as to personnel services, equipment and other operating expenses.

13. STATE EMPLOYER CONTRIBUTIONS

Use state employer contributions as calculated by State Personnel Division for personnel included in the programs funded by the Formula.

14. COST OF EDUCATIONAL AND GENERAL OPERATIONS

Add the amounts calculated in Steps 11a, 11b, 12 and 13. From this total subtract the amount of teaching faculty salaries for academic discipline 1800, Military Science, computed in Step 4a. This is the total cost of educational and general (E & G) operations.

15. REVENUE TO BE GENERATED BY THE INSTITUTION IN SUPPORT OF EDUCATIONAL AND GENERAL OPERATIONS

Multiply the amount calculated in Step 14 by .17 (S.C. State .05). Multiply the resulting amount by 1.XXX (Where .XXX equals the percent of out-of-State students enrolled in Fall 1981). This is the total revenue to be generated by the institution for E & G operations.

16. STATE FUNDS REQUIRED TO SUPPORT EDUCATIONAL AND GENERAL OPERATIONS

Subtract the amount calculated in Step 15 from the amount calculated in Step 14. This is the amount of total State funds required for educational and general operations.

TABLE 1

APPROPRIATION FORMULA INSTITUTION GROUPS

GROUP I

Institutions conferring the doctoral degree as the highest degree awarded:

Clemson University
U.S.C.-Columbia

GROUP II

Institutions conferring the bachelor's or master's degree as the highest degree awarded:

College of Charleston
Francis Marion College
Lander College
S.C. State College
The Citadel
U.S.C.-Aiken
U.S.C.-Coastal
U.S.C.-Spartanburg
Winthrop College

GROUP III

College level 2-yr. branches of 4-yr. institutions:

U.S.C.-Beaufort
U.S.C.-Lancaster
U.S.C.-Salkehatchie
U.S.C.-Sumter
U.S.C.-Union

S. C. COMMISSION ON HIGHER EDUCATION
ACADEMIC DISCIPLINE DATA

INSTITUTIONS GROUP 1

TABLE 2

	STUDENT/FACULTY RATIOS				U/G	SUPPORT PERCENTAGES			
	U/G	G-1	G-2	AVG-SAL		U/G	G-1	G-2	
0200 ARCHITECTURE	13 : 1	06 : 1	06 : 1	28,045		.28	.28	.20	
0500 BUSINESS & MANAGEMENT	24 : 1	17 : 1	12 : 1	31,992		.30	.30	.30	
0800 TEACHER EDUCATION	21 : 1	12 : 1	09 : 1	25,910		.35	.35	.35	
0900 PRACTICE TEACHING	11 : 1	00 : 1	00 : 1	25,910		.35	.35	.35	
1000 FINE & APPLIED ARTS	13 : 1	00 : 1	00 : 1	25,454		.29	.29	.29	
1203 NURSING (IN & ABOVE)	07 : 1	07 : 1	07 : 1	22,062		.35	.35	.35	
1211 PHARMACY	15 : 1	00 : 1	00 : 1	27,104		.60	.60	.60	
1214 PUBLIC HEALTH	17 : 1	00 : 1	00 : 1	32,960		.23	.23	.23	
1220 SPEECH PATHOLOGY & AUDIOLOGY	09 : 1	06 : 1	06 : 1	32,940		.23	.23	.23	
1300 HOME ECONOMICS	16 : 1	12 : 1	12 : 1	24,530		.35	.35	.35	
1400 LAW	00 : 1	22 : 1	00 : 1	44,560		.31	.31	.31	
1600 LIBRARY SCIENCE	19 : 1	11 : 1	11 : 1	30,722		.25	.25	.25	
1900 MILITARY SCIENCE	12 : 1	00 : 1	00 : 1	21,175		.05	.05	.05	
1929 TEXTILE SCIENCE	09 : 1	05 : 1	03 : 1	31,729		.05	.05	.05	
2104 SOCIAL WORK	15 : 1	12 : 1	12 : 1	20,770		.22	.22	.22	
2105 CRIMINAL JUSTICE	19 : 1	15 : 1	15 : 1	20,770		.22	.22	.22	
4999 REMEDIAL EDUCATION	14 : 1	00 : 1	00 : 1	27,579		.25	.25	.25	
5200 NURSING (ASSOC.)	07 : 1	00 : 1	00 : 1	17,330		.20	.20	.20	
0600 COMMUNICATIONS	20 : 1	12 : 1	06 : 1	26,117		.30	.30	.30	
1100 FOREIGN LANGUAGES	20 : 1	12 : 1	06 : 1	25,454		.25	.25	.25	
1500 LETTERS	20 : 1	12 : 1	06 : 1	25,377		.15	.15	.15	
2000 PSYCHOLOGY	20 : 1	12 : 1	06 : 1	20,069		.36	.36	.36	
2102 PUBLIC AFFAIRS & SERVICES	20 : 1	12 : 1	06 : 1	20,270		.10	.10	.10	
2200 SOCIAL SCIENCES	20 : 1	12 : 1	06 : 1	20,401		.22	.22	.22	
4900 INTERDISCIPLINARY STUDY	20 : 1	12 : 1	06 : 1	27,670		.25	.25	.25	
5222 GENERAL STUDIES	20 : 1	12 : 1	06 : 1	20,402		.15	.15	.15	
0400 BIOLOGICAL SCIENCES	22 : 1	09 : 1	07 : 1	31,052		.70	.70	.70	
0700 COMPUTER & INFORMATION SCIENCE	22 : 1	09 : 1	07 : 1	31,064		.60	.60	.60	
1700 MATHEMATICS	22 : 1	09 : 1	07 : 1	20,171		.19	.19	.19	
1900 PHYSICAL SCIENCES	22 : 1	09 : 1	07 : 1	31,729		.60	.60	.60	
0100 AGRICULTURE	17 : 1	00 : 1	03 : 1	20,932		.45	.45	.45	
0114 FORESTRY	17 : 1	00 : 1	03 : 1	20,932		.60	.60	.60	
2103 PARKS & RECREATION MGT.	17 : 1	00 : 1	03 : 1	20,770		.40	.40	.40	
0900 ENGINEERING	10 : 1	11 : 1	06 : 1	31,915		.60	.60	.60	
0913 INDUSTRIAL & MGT. ENGINEERING	10 : 1	11 : 1	06 : 1	31,915		.60	.60	.60	

S. C. COMMISSION ON HIGHER EDUCATION
ACADEMIC DISCIPLINE DATA

INSTITUTION GROUP II

TABLE 3

	STUDENT/FACULTY RATIOS			SUPPORT PERCENTAGES	
	U/G	G-1	G-2	U/G	G-1
0500 BUSINESS & MANAGEMENT	24 : 1	17 : 1	00 : 1	25,200	.20
0900 TEACHER EDUCATION	21 : 1	12 : 1	00 : 1	23,309	.25
0929 PRACTICE TEACHING	11 : 1	00 : 1	00 : 1	23,309	.25
1000 FINE & APPLIED ARTS	13 : 1	08 : 1	00 : 1	22,196	.24
1202 JOURNALISM (MA & ABOVE)	07 : 1	00 : 1	00 : 1	21,204	.35
1270 SPEECH PATHOLOGY & AUDIOLOGY	09 : 1	06 : 1	00 : 1	22,109	.40
1300 HOME ECONOMICS	14 : 1	12 : 1	00 : 1	20,973	.25
1620 LIBRARY SCIENCE	19 : 1	11 : 1	00 : 1	21,506	.25
1600 MILITARY SCIENCE	12 : 1	00 : 1	00 : 1	21,175	.45
2104 SOCIAL WORK	15 : 1	12 : 1	00 : 1	20,249	.10
2105 CRIMINAL JUSTICE	19 : 1	15 : 1	00 : 1	20,249	.10
6999 REMEDIAL EDUCATION	14 : 1	00 : 1	00 : 1	20,200	.25
5200 HORSTING (ASSOC.)	07 : 1	00 : 1	00 : 1	20,556	.35
0600 COMMUNICATIONS	20 : 1	12 : 1	00 : 1	19,800	.25
1100 FOREIGN LANGUAGES	20 : 1	12 : 1	00 : 1	23,531	.20
1900 LETTERS	20 : 1	12 : 1	00 : 1	22,293	.20
2000 PSYCHOLOGY	20 : 1	12 : 1	00 : 1	23,519	.20
2100 PUBLIC AFFAIRS & SERVICE	20 : 1	12 : 1	00 : 1	20,249	.10
2200 SOCIAL SCIENCES	20 : 1	12 : 1	00 : 1	23,805	.10
5000 INTERDISCIPLINARY STUDY	20 : 1	12 : 1	00 : 1	26,300	.30
5999 GENERAL STUDIES	20 : 1	00 : 1	00 : 1	20,200	.10
0600 BIOLOGICAL SCIENCES	22 : 1	09 : 1	00 : 1	24,056	.43
0700 COMPUTER & INFORMATION SCIENCE	22 : 1	09 : 1	00 : 1	24,070	.43
1100 MATHEMATICS	22 : 1	09 : 1	00 : 1	22,506	.25
1900 PHYSICAL SCIENCES	22 : 1	09 : 1	00 : 1	24,627	.43
0900 ENGINEERING	10 : 1	11 : 1	00 : 1	24,595	.45

TABLE 4
S. C. COMMISSION ON HIGHER EDUCATION
ACADEMIC DISCIPLINE DATA

INSTITUTION GROUP 111

	STUDENT/FACULTY RATIOS				U/G	SUPPORT PERCENTAGES	
	U/G	G-1	G-2	AVG. SAL		G-1	G-2
0500 BUSINESS & MANAGEMENT	24 :1	00 :1	00 :1	17,195	.20	.00	.00
0800 EDUCATION	22 :1	00 :1	00 :1	17,536	.25	.00	.00
1000 FINE & APPLIED ARTS	13 :1	00 :1	00 :1	17,999	.15	.00	.00
5200 NURSING (ASSOC.)	07 :1	00 :1	00 :1	17,337	.35	.00	.00
0600 COMMUNICATIONS	20 :1	00 :1	00 :1	15,240	.25	.00	.00
1100 FOREIGN LANGUAGES	20 :1	00 :1	00 :1	18,897	.20	.00	.00
1500 LETTERS	20 :1	00 :1	00 :1	17,551	.20	.00	.00
2000 PSYCHOLOGY	20 :1	00 :1	00 :1	18,610	.20	.00	.00
2200 SOCIAL SCIENCES	20 :1	00 :1	00 :1	18,909	.18	.00	.00
4200 INTERDISCIPLINARY STUDY	20 :1	00 :1	00 :1	17,051	.30	.00	.00
5220 GENERAL STUDIES	20 :1	00 :1	00 :1	17,804	.18	.00	.00
0400 BIOLOGICAL SCIENCES	22 :1	00 :1	00 :1	19,176	.43	.00	.00
0700 COMPUTER & INFORMATION SCIENCE	22 :1	00 :1	00 :1	17,525	.43	.00	.00
1700 MATHEMATICS	22 :1	00 :1	00 :1	17,255	.25	.00	.00
1900 PHYSICAL SCIENCES	22 :1	00 :1	00 :1	20,003	.43	.00	.00
0900 ENGINEERING	18 :1	00 :1	00 :1	22,336	.45	.00	.00

TABLE 5
1983-84

SOUTH CAROLINA COMMISSION ON HIGHER EDUCATION
FORMULA FOR OPERATION AND MAINTENANCE OF PLANT

I. GENERAL SERVICES* = $SW [(FTES + (2 \times FTEE)] \times 3.90) + (RCB \times .0028)$

Definitions of terms used in the formula:

1. SW is the average hourly earnings for services (adjusted) for January, 1982, as shown in the Survey of Current Business published by the Bureau of Economic Analysis of the U.S. Department of Commerce.
2. FTES is the full-time equivalent students determined in step 2.
3. FTEE is the full-time employees enrolled in the State Retirement System as of January 1, 1982.
4. RCB is the replacement cost of buildings which shall be determined by applying the factors for the specific classes of construction, as shown on Markel's Handy Appraisal Chart¹ to the original construction costs of each education, general, and service building.

II. BUILDING MAINTENANCE* = $MCF \times RCB$

Definitions of terms used in the formula:

1. MCF is the maintenance cost factors designated as follows (factors expressed as percentage figures):

	Wood Frame Construction ²	Masonry-Wood Construction ³	Masonry-Concrete Construction ⁴
Air Conditioned	1.90	1.45	1.25
Non-Air Conditioned	1.75	1.30	1.10

2. RCB is the replacement cost of buildings as calculated in the formula for Physical Plant General Services.

¹Published by Markel Appraisal Chart Company, 4108 North Ave., Cincinnati, Ohio 45236, as of January and July each year. Use the January 1982 issue for budget submission.
²Designated as "Frame" on Markel's Handy Appraisal Chart.
³Designated as "Semi-Fireproof" on Markel's Handy Appraisal Chart.
⁴Designated as "Fireproof" on Markel's Handy Appraisal Chart.

TABLE 5
(Continued)

$$\text{III. CUSTODIAL SERVICES*} = \text{SW} \times \text{I} \times \frac{\text{GSF}}{22,400} \times 2080 \times 1.2$$

Definitions of terms used in the formula:

1. SW is the average hourly earnings for services (adjusted) for January, 1982, as shown in the Survey of Current Business published by the Bureau of Economic Analysis of the U.S. Department of Commerce.
2. I represents labor and material inflation factor. For fiscal year 1983-84 this factor is 1.057.
3. GSF is the gross square feet (outside dimensions) of educational, general, and service buildings.

* * * * *

$$\text{IV. GROUNDS MAINTENANCE*} = \text{SW} (.70P + 122L + .50E)$$

Definitions of terms used in the formula:

1. SW is the average hourly earnings for services (adjusted) for January, 1982, as shown in the Survey of Current Business published by the Bureau of Economic Analysis of the U.S. Department of Commerce.
2. P is the total linear feet of perimeter of all campus buildings including academic, office, service, administration, etc.
3. L is the total number of acres of lawns and regularly maintained areas (malls, flowerbeds, parking lots, sidewalks, streets, etc.). Exclude all buildings, street areas, and areas covered under organized activities (i.e., college farms).
4. E is the Fall Semester 1982 Headcount Enrollment.

* See Table 6 for definition.

TABLE 6

OPERATION AND MAINTENANCE OF PLANT

DEFINITIONS

- I. Physical Plant General Services - Salaries, wages, supplies, travel, equipment, and other operating expenses to carry out the duties of physical plant administration, planning, and general services. Examples of the activities included are:
 1. Administration - Salaries, wages, travel, equipment, and other operating costs required to administer one or more functional units of the Physical Plant.
 2. Planning - Salaries, wages, travel, equipment, and other costs required to prepare architectural and engineering plans and specifications, for the expansion, renovation, and rehabilitation of physical plant facilities, excluding fees for new construction.
 3. Other General Services, including -
 - (a) Acquisition and repair of general classroom and laboratory furniture. Does not include office furniture.
 - (b) Central receiving and store of supplies and equipment.
 - (c) Safety, including fire, occupational, radiation, health and sanitation safety.
 - (d) Garbage and trash disposal.
 - (e) Hauling, moving and storing.
 - (f) Property Insurance
 - (g) Truck and Automobile expense in general service of the institution.
- II. Building Maintenance - Costs, including salaries, wages, supplies, materials, equipment, services, and other expenses, necessary to keep building in good appearance and usable condition and prevent the building from deteriorating once it has been placed in first class condition for that type and age of building. Does not include Auxiliary Enterprise buildings. Building Maintenance includes minor repairs and alterations, costs of materials, hire of personnel, and other necessary expenses for the repair and/or painting of the following: roofs, exterior walls, foundations, flooring, ceilings,

partitions, doors, windows, plaster, structural ironworks, screens, window shades, venetian blinds, plumbing, heating and air conditioning equipment within or a part of the building, electric wiring, light fixtures (including the replacement of lamps), washing of all outside window surfaces, built-in shelving and other related items.

- III. Custodial Services - Costs including salaries, wages, supplies, materials, equipment, services, and other expenses necessary to keep the buildings in a clean and sanitary condition. Does not include Auxiliary Enterprise buildings. These services include care of the floors, stairways and landings, and restrooms; cleaning chalkboards, inside of windows, walls, and room furniture and fixtures; assigned dusting, removal of waste paper and refuse and other related duties.

Common operations include: Mopping, sweeping, waxing, renovating of floors (sanding and refinishing of floors are excluded); dusting, polishing of furniture and fixtures such as venetian blinds, partitions, pictures, maps, radiators, etc.; cleaning of chalkboards, chalk trays, erasers, and replacement of chalk; washing and dusting of walls, cleaning and disinfecting commodes and urinals, cleaning and washing other fixtures, walls and partitions, and replenishing supplies for restrooms; and emptying and cleaning of waste receptacles, and dusting and cleaning of windows, and other glass surfaces; sweeping and cleaning of entrances, and opening and/or closing of buildings, doors, and windows.

- IV. Grounds Maintenance - Costs including salaries, wages, supplies, materials, equipment, services, and other expenses relating to the upkeep of all lands designated as campus property (improved and unimproved) not occupied by actual buildings, including any court, patio, and/or garden or court enclosed by buildings. Grounds Maintenance begins after the site improvements are complete.

Phases of Grounds Maintenance are:

1. Land Improvements
 - (a) Permanent - Lawns, trees, shrubs, etc.
 - (b) Seasonal - Flowers, bulbs, etc.
2. Circulation Systems
 - (a) Vehicular - Streets and roads - improved and unimproved; parking areas - improved and unimproved; traffic controls - signal lights, signs, and barriers.
 - (b) Pedestrian - Walks and paths - improved and unimproved.
3. Other Activities
 - (a) Campus lighting
 - (b) Irrigation Systems
 - (c) Non-structural improvements - Walls, fences, fountains, campus furniture, others.

TABLE 6
(Continued)

(d) Ancillary enterprises - Nursery, Greenhouse - areas for special academic study.

- V. Utilities - All costs of purchase, manufacture and delivery of utility services, including: electricity, steam heat, water (hot, cold or chilled), sanitary sewers, and gas for heating, cooling and lighting. Does not include costs of utilities for Auxiliary Enterprises.

MARKEL APPRAISAL CHART⁽¹⁾

REPRODUCTION COST CONVERSION TABLE

January, 1982

<u>Year</u>	<u>Index</u>	<u>Year</u>	<u>Index</u>	<u>Year</u>	<u>Index</u>	<u>Year</u>	<u>Index</u>
1915	26.72	1932	17.41	1949	5.51	1966	3.12
1916	23.27	1933	17.99	1950	5.40	1967	2.97
1917	18.87	1934	16.76	1951	5.07	1968	2.78
1918	15.25	1935	16.66	1952	4.88	1969	2.57
1919	11.79	1936	15.88	1953	4.68	1970	2.39
1920	9.54	1937	13.63	1954	4.57	1971	2.14
1921	12.50	1938	13.56	1955	4.44	1972	1.98
1922	13.50	1939	13.50	1956	4.26	1973	1.78
1923	12.05	1940	13.36	1957	4.07	1974	1.68
1924	12.16	1941	12.44	1958	3.96	1975	1.58
1925	12.44	1942	11.20	1959	3.84	1976	1.44
1926	12.44	1943	10.71	1960	3.74	1977	1.35
1927	12.44	1944	10.38	1961	3.64	1978	1.24
1928	12.44	1945	10.00	1962	3.57	1979	1.14
1929	12.44	1946	8.41	1963	3.46	1980	1.08
1930	13.50	1947	6.23	1964	3.37	1981	1.02
1931	15.16	1948	5.51	1965	3.28	1982	1.00

(1) Copyright: Markel Appraisal Chart Co., Cincinnati, Ohio.

The current value of a building is found by multiplying the original cost by the Index for the year it was bid. For example, a \$1,000,000 building bid in 1960 will have a current year value in 1982 of \$3,740,000.