

California State University Capital Planning, Design and Construction ASF PER FTE MODEL USER GUIDE	Subject	Revision	
	Restructuring Campus Capacities	Effective June 1998	

Restructuring Campus Capacities

a report from the

Task Force on Facilities Planning and Utilization

The California State University

California State University Capital Planning, Design and Construction ASF PER FTE MODEL USER GUIDE	Subject	Revision	
	Restructuring Campus Capacities	Effective June 1998	

Restructuring Campus Capacities

a report from the

Task Force on Facilities Planning and Utilization

June 1998
California State University
Office of the Chancellor, Physical Planning and Development
Los Alamitos, California

California State University Capital Planning, Design and Construction ASF PER FTE MODEL USER GUIDE	Subject	Revision	
	Restructuring Campus Capacities	Effective June 1998	

Table of Contents

	<i>page</i>
Executive Summary	i
Background and Context	
Task Force Findings	
Task Force Recommendations	
Members of the Task Force	v
I. CSU Enrollments and Campus Capacities: the Long-Range Issue	1
II. Current Method for Establishing Campus Capacity	2
III. A Proposal for Restructuring Campus Capacities based upon an ASF/FTE Model	4
IV. Comparison of Campus Capacities Based Upon the ASF/FTE Approach with Capacity Based upon Existing Stations	11

Appendices:

- A. Facilities Planning in the CSU, Background
- B. Utilization of Instructional Space in the CSU
- C. Space Types Included in the ASF/FTE Model
- D. Space Standards Chart
- E. Equations used for Indoor Physical Education
- F. Equations used in the Instructional Sector Model
- G. Equations used in the Sub-Models
- H. Instructional and Instructional Related Space Requirements by Discipline by Campus

California State University Capital Planning, Design and Construction ASF PER FTE MODEL USER GUIDE	Subject Restructuring Campus Capacities	Revision	
		Effective June 1998	

Executive Summary

Background and Context

1. In the late 1990s, the California State University faces a future characterized by substantial potential for enrollment growth (26 percent between 1995 and 2005 - CPEC, “A Capacity for Growth”, 1995) and substantial uncertainty about the ability of the state to fully fund this growth.
2. In terms of physical planning and the capital budget, there may be diminished opportunity for new capital outlay growth projects in the coming decade. Even if future capital outlay bond issues are passed, the continuing need for renovation and replacement requirements for the existing inventory of physical facilities will significantly reduce the availability of funds for growth.
3. The basic question is how can the CSU most effectively match its physical resources with its enrollment demands. If any part of the projected enrollment growth is to be accommodated in the lean fiscal environment that is envisioned, it is imperative that the campuses have the ability to plan for and to use the existing physical plant to best serve the instructional mission.
4. To address these planning issues a systemwide Task Force on Facilities Planning and Utilization was appointed in February 1996 by Jon Regnier, Senior Director of Physical Planning and Development. The charge to the Task Force was to:
 - a. provide a more accurate method for determining campus capacities,
 - b. provide a measurement standard that will increase campus flexibility to manage space and facilities and to accommodate FTE,
 - c. eliminate reliance on the current facility utilization reports and overly proscriptive space standards, and
 - d. to simplify methods for evaluating capital outlay priorities.

Within the context of this charge, the Task Force was further asked to review and evaluate a planning model based upon the concept of “assignable square feet per full-time equivalent” (ASF/FTE) and to determine whether the model is capable of evaluating current space needs and projecting future space requirements. The result would be a model that could be supported by CPEC and the state funding agencies.

5. The Task Force completed its deliberations and released a preliminary draft of the current report to the campus Executive Deans for their review and comments in December, 1996.

California State University Capital Planning, Design and Construction ASF PER FTE MODEL USER GUIDE	Subject Restructuring Campus Capacities	Revision	
		Effective June 1998	

Since then the report has been through an extensive review process that included two video conferences, a roundtable discussion, and campus wide review of a final draft.

Task Force Findings:

1. The ASF/FTE model adjusts the reported capacities of each campus to include “other earned” FTE. This amounts to an approximate 6.5 percent increase of the reported seat-count capacity systemwide.
2. The model assumes that space required for student access to computer workstations will be incorporated as part of library space planning in accordance with recommendations contained in “Information Resource Facility Planning for the 21st Century,” (Task Force on Facility Planning for Library and Information Resources, CSU, 1996) which suggests “... a campus wide view of information resources which integrates the computer, telecommunications and media services, and library resources.”
3. At any given point in time, the model provides by campus and by discipline a capacity verses enrollment profile. This encourages space managers and planners alike to maintain a current and complete Space and Facilities Data Base (SFDB).
4. The ASF/FTE model fully incorporates the existing space utilization and planning standards currently employed by the CSU in its capital outlay planning process. The model expands the concept of the capacity of a campus to accommodate students beyond the classroom and class laboratory station count in two important ways, however, by recognizing that:
 - (a) Some instructional activities occur in campus spaces not previously included as part of classroom and class lab capacity (e.g., supervised study, group projects). The practical effect of this is to shift the physical planning perspective from classroom capacity to campus capacity. Explicit recognition that all space on campus in some way affects the capacity of the campus to accommodate students puts a stronger emphasis upon the management of all existing space to better accommodate the instructional mission.
 - (b) Some courses are delivered to students outside the traditional classroom environment via television or computer networks. These students may be on campus (e.g., in dorm rooms or other computer access sites) or off-campus at sites in the community such as community college or high school classrooms, various worksites; or in their individual homes. The effect of remote delivery

California State University Capital Planning, Design and Construction ASF PER FTE MODEL USER GUIDE	Subject Restructuring Campus Capacities	Revision	
		Effective June 1998	

of this type reduces the direct need for on campus classrooms but does not reduce the need for the spaces that enable and support the remote delivery.

5. When integrated with campus data on instructional offerings by discipline, level, and mode of instruction (from the Course Section Report), the ASF/FTE model provides a dynamic tool for assessing instructional space needs based upon existing space standards and the latest reported campus data on FTE distributions.
6. The model allows increased flexibility in adjusting the uses of instructional space and provides the campuses with incentives to manage the use of space to best meet the needs of the instructional programs. The campuses will benefit because the model identifies space needs based upon current use patterns, and it can be used to internally adjust space allocations.
7. Implementation of the model replaces the detailed space utilization reports with an annual comprehensive space requirements report as compared to space available (see Table 1). Because a campus could alter space when it was necessary, there would be no requirement to assess the detailed utilization of space on an annual basis. (Audits of space use could occur at intervals, perhaps when changes were sought.)
8. The model reduces the requirements for campuses to report changes in the campus space file to the chancellor's office (the "Organizational Report", which reports space type by HEGIS codes, will still be required). The construction of instructional space would depend on the current campus capacity and the projection of FTE in future years. These FTE projections are already reviewed by state agencies, thus no new processes would be required.
9. Through the operational use of the model, the long-term objective will be to eliminate the need for campuses to provide statistics on instructional mode and level (forms: PPD 2-1, Full-time Equivalent Enrollment Distribution by Discipline; 2-2, Enrollment Distribution by Level and Category of Instruction; and 2-3, Calculation of Space Requirements for Instructional Projects) as part of the capital planning process. Projected space needs by discipline, instructional mode, and level will be determined by projecting these existing enrollment percentages to selected years.

California State University Capital Planning, Design and Construction ASF PER FTE MODEL USER GUIDE	Subject Restructuring Campus Capacities	Revision	
		Effective June 1998	

Task Force Recommendations

1. The ASF/FTE model should be adopted to provide guidelines for evaluating space needs for all CSU campuses.
2. The draft report should be distributed for internal review by the CSU campuses, the Academic Senate, the Executive Council and Academic Affairs in the Chancellor’s Office, and modified as appropriate.
3. The final report should be forwarded for review by the California Postsecondary Education Commission (CPEC), the Department of Finance, the Office of the Legislative Analyst, and the appropriate fiscal committees of the legislature.
4. The ASF/FTE model should be implemented with the 2000-2001 capital outlay budget cycle.
5. Detailed facility utilization and enrollment distribution reports should be undertaken every five years.
6. Physical Planning and Development (PPD) will provide the computerized copy of the model to each campus so that information from the latest Course Section Report and projected FTE distributions can be processed for local planning purposes.
7. The campuses and PPD should work together to review preliminary model outputs to insure that the reported physical facilities inventory (SFDB) is complete and that use codes have been correctly assigned.

California State University Capital Planning, Design and Construction ASF PER FTE MODEL USER GUIDE	Subject Restructuring Campus Capacities	Revision	
		Effective June 1998	

Members of the Task Force

Campus Representatives

Mr. Russell Decker
Director of Physical Planning, CSU San Marcos

Ms. Deborah Gannon-DuVall,
Facilities Planner, Sonoma State University

Mr. R. Stephen Jack
Director, Capital Planning, San Francisco State University

Ms. Kathy Lamoree, Contract Administrator, California Polytechnic State University, San Luis Obispo

Dr. Leroy M. Morishita
Director, University and Budget Planning, San Francisco State University

Mr. David Salazar
Director of Facilities Planning & Development, CSU Monterey Bay

Observer

Mr. William L. Storey
Chief Policy Analyst, California Postsecondary Education Commission

Chancellor's Office Representatives/Staff

Mr. J. Patrick Drohan, Chair of the Task Force
Deputy Senior Director, PP&D

Ms. Sharon Fike
Associate Program Manager, PP&D

Ms. Sandy Jackson-Clarke
Associate Program Manager, PP&D

Dr. Frank Jewett
Director, Research Projects, Information Resources and Technology

Ms. Elvyra San Juan
Chief, Program Management, PP&D

Mr. Bob Sikes
Special Consultant, PP&D

California State University Capital Planning, Design and Construction ASF PER FTE MODEL USER GUIDE	Subject Restructuring Campus Capacities	Revision	
		Effective June 1998	

I. CSU Enrollments and Campus Capacities: the Long-Range Issue

The objective of the annual Capital Outlay Program budget for the California State University is to provide facilities appropriate to the CSU's approved educational programs, to create environments conducive to learning, and to insure that the quality and quantity of facilities at all campuses serve the students equally well.¹ Projections of enrollment and funding potentials in future years suggest that this objective will be difficult to meet as the CSU moves into the next century.

The California Postsecondary Education Commission (CPEC), in its 1995 report, "A Capacity For Growth," projects that the California State University will enroll 411,000 students in fall 2005 (this represents a 26 percent increase over the fall 1995 enrollment of 326,000). The enrollment equates to an increase of almost 70,000 FTE by 2005. The enrollment growth arises as a consequence of the state's projected population growth and incorporates the effects of the echo of the post-WW II baby boom (the children of the baby boomers - in Clark Kerr's terms, "Tidal Wave II"). Although growth is projected for each of the ten years, the primary onslaught of "Tidal Wave II" will not be felt until the turn of the century. Such growth implicitly assumes that the California economy will continue its recovery from the 1991 recession and will remain robust into the next century.

Based upon its enrollment projection and an assessment of the likely fiscal future for public higher education in the state, the CPEC report identified a serious shortfall in the ability of the CSU to accommodate the anticipated growth. The recognition of this gap between potential enrollments and the anticipated level of funding raises a number of long-range planning issues for the CSU.

In terms of physical planning and the capital budget, there may be diminished opportunity for new capital outlay growth projects in the coming decade. Even if future capital outlay bond issues are proposed and passed by the voters, the ongoing renovation and replacement requirements for the existing inventory of plant and facilities is likely to absorb all of the funds that come available.

The basic question is how can the CSU most effectively match its physical resources with its enrollment demands. The situation provides a strong rationale to proceed with restructuring the definition of capacity and how capital resources are managed. If any part of the projected enrollment growth is to be accommodated in the lean fiscal environment that is envisioned, it is imperative that the campuses have the ability to use the physical plant to best serve the instructional mission. The emerging impact of electronic technology upon instructional delivery gives added weight to the imperative.

II. Current Method For Establishing Campus Capacity

¹ An outline of the CSU capital outlay planning process is provided in Appendix A.

California State University Capital Planning, Design and Construction ASF PER FTE MODEL USER GUIDE	Subject Restructuring Campus Capacities	Revision	
		Effective June 1998	

The current standards for the utilization of instructional space are defined by the weekly hours of occupancy of student stations in lecture and teaching laboratory rooms. (The standards recognize that it is impossible to schedule all rooms throughout the day or to realize 100 percent station occupancy when the room is scheduled.) Exhibit 1 shows the current standards. Although the standards are couched in terms of the number of hours a week rooms should be scheduled and the station occupancy ratio when the room is used, the effect of the two components is to determine station hours per week, e.g., a 66 percent lecture station occupancy rate applied to 53 hours per week implies that if all stations are occupied on average 35 hours per week, the standard is being met.

At peak enrollment (1990) eight CSU campuses met or exceeded the 35 hours of lecture station occupancy per week. This included our smallest campus, several medium and large campuses, rural residential campuses, and urban commuter campuses. The campuses achieved this result by increasing the station occupancy rate when the classrooms were used from the 66 percent guideline to a system average of 75 percent (with a high of 82.1 percent). The hourly room schedule rate of these same eight campuses was between 45 and 50 hours per week with a system average of 44.5 hours per week of classroom use, while the CPEC guideline is 53 hours per week.

Clearly, the relevant standard is the overall station occupancy rate of 35 hours per week which can be achieved by many combinations of room scheduling and station occupancy rates (when the room is scheduled). Attempting to force an increase in the hourly room use tends to drive down average class size which is counterproductive to overall utilization efficiency. The latest utilization report indicates an average station occupancy rate even higher (78.5 percent) with a top campus fill rate of 92.8 percent. The hourly room use rate dropped from 44.5 to 33.4 percent and the resultant station occupancy rate to 26.2 percent. During this same time period, mean lower division class size increased from 32.2 to 34.1.

Assuming the standard remains at 35 hours per week of seat use, one way for campuses to achieve higher utilization is to modify classroom facilities to better match the class size offerings of the academic program. The ASF/FTE model will provide an incentive to do this, to manage and match facilities to the course offerings, rather than attempting to increase room use on a per hour per week basis.

California State University Capital Planning, Design and Construction ASF PER FTE MODEL USER GUIDE	Subject Restructuring Campus Capacities	Revision	
		Effective June 1998	

Exhibit 1 - Instructional Space Utilization Standards

	Room Hours per week	Station Occupancy Rate	Station Hours per week
Classrooms	53.0	66%	35.0
Teaching Laboratories Lower Div.	27.5	85%	23.4
Teaching Laboratories Upper Div. & Grad.	22.0	80%	17.6

Application of these standards to the campus' inventory of classrooms and class laboratories determines the weekly student contact hours (WSCH) the facilities can support or accommodate. FTE that can be accommodated in the facilities is then determined based upon ratios of WSCH per unit of credit. The total FTE a campus can accommodate is the sum of classroom and teaching laboratory capacity and FTE generated in instruction conducted outside classrooms and class labs (including student teaching, graduate thesis, student research, various forms of non-traditional delivery, and off-site/distance education).

The "capacity" of a campus to accommodate FTE students is determined by applying the utilization standards to the student stations by category as reported in the Space and Facilities Data Base (SFDB), summing the result, and adding FTE to account for instruction that is taught in modes and spaces other than lecture or laboratory.

Instructional activity space contains various space types (see Appendix C).

The calculation of capacity implicitly assumes that lecture courses are taught in classrooms and laboratory courses are taught in class laboratories. Recent utilization studies indicate, however, that CSU campuses generate a substantial amount of FTE by providing instruction outside regular classrooms and teaching laboratories. In fall 1993, for example, almost 20 percent of the FTE was generated outside of classrooms and laboratories. This percentage is increasing over time as the university expands its instructional offerings at off-campus sites and uses technology to provide instruction outside regular classrooms and class laboratories. (A summary of the 1993 space utilization study is included in Appendix B.)

Evidence clearly indicates that whatever space is adequate for a class will be scheduled, regardless of that space's classification. One of the causes for this cross-use of space is the change in instructional delivery mode. Television, computers, communication networks, and audio-visual techniques have altered teaching methods since the space classification system was first introduced. Expanded use of technology in distant learning settings or integrated

California State University Capital Planning, Design and Construction ASF PER FTE MODEL USER GUIDE	Subject Restructuring Campus Capacities	Revision	
		Effective June 1998	

media center environments suggest that current space classifications are no longer adequate. Attempting to force the old model on new modes of delivery is inappropriate.

The cross use of space brings into question the current way of measuring the instructional capacity of a campus. If space currently excluded from the capacity calculation is used for a significant portion of instruction, how accurate are the present set of campus capacities? Changing a room type from lecture or laboratory to a television studio or a distance learning laboratory, for example, reduces the campus instructional capacity because student stations are removed from the inventory and television studios do not fall under state utilization standards. The validity of the current proscriptive formulas becomes questionable as campuses alter their facilities to accommodate new instructional modalities.

III. A Proposal For Restructuring Campus Capacities Based Upon an ASF/FTE Model

Current measurements of campus capacity, i.e., utilization standards that convert lecture and laboratory station counts to FTE are no longer appropriate due to the alternative uses of space and non-traditional methods of educational delivery. The situation was described in a recent CSU memo regarding multi-year enrollment and FTE planning:

"Capacity" (to accommodate students) includes more than lecture halls, classrooms, and teaching labs. Instruction is taking place in locations beyond these traditional settings - in workplaces, K-12 schools, other campuses, hospitals, clinics and government offices. The home or any place that is appropriately wired can become a location for mediated instruction and distributed learning... (Executive Vice Chancellor Broad to the Presidents, June 18, 1996)

An important part of the solution is to measure campus FTE capacity on an ASF/FTE basis which recognizes that both traditional instructional space and instructional support space can be used to provide or originate instruction.

The objectives of this new approach are:

- (a) to provide standards that will more accurately measure the ability to accommodate FTE and that are sensitive to each campus' unique mix of instruction and pedagogy
- (b) to provide incentives for each campus to manage and use space to best meet the needs of its instructional program
- (c) to eliminate reliance on the current facility utilization reports which do not accurately reflect the way instruction is carried out, and are not considered effective as a management tool

California State University Capital Planning, Design and Construction ASF PER FTE MODEL USER GUIDE	Subject Restructuring Campus Capacities	Revision	
		Effective June 1998	

- (d) to streamline the capital outlay program justification process by eliminating redundant enrollment related forms and to simplify methods for evaluating capital outlay priorities
- (e) to reduce the requirements for reporting changes to the campus space file to the Chancellor's Office and to reduce the number of reconciliation report edits associated with maintaining the space inventory.

Using the ASF/FTE model, a capacity for each campus will be established based upon its inventory of ASF and the campus ratio of required ASF/FTE. Application of the model is described in the generic examples below.

1. Project to Accommodate Growth

A campus has a "Target Year" (target year is two years past projected building occupancy) discipline deficit in science of 50,000 ASF and a campuswide deficit in instructional space of 100,000 ASF. This expressed need would qualify as a campus growth project for new space in the science discipline.

2. Project for Discipline Specific Need

A campus has a "Target Year" deficit of 30,000 ASF in the humanities discipline and a campuswide surplus of 100,000 ASF in instructional space. Since the discipline space is not highly specialized, the campus would be expected to evaluate the renovation of existing surplus space to accommodate the discipline space deficiency.

3. Specialized Space that is Functionally Obsolete (replacement projects)

A campus has a 20,000 ASF "Target Year" surplus of space in the science discipline and a campuswide surplus of 50,000 ASF. The campus cannot justify new space for growth. However, the campus science program is located in facilities that are "functionally obsolete". Existing space cannot be economically remodeled to accommodate the specialized need in the science program, therefore construction of a replacement facility for science laboratories may be in order.

4. Phase-out of Temporary Structures

It is the Board of Trustees' policy to eliminate temporary structures from The California State University campuses. In programming the phase-out of temporary structures, secondary effects may involve the remodeling of existing

California State University Capital Planning, Design and Construction ASF PER FTE MODEL USER GUIDE	Subject Restructuring Campus Capacities	Revision	
		Effective June 1998	

space, the construction of new space, or the combination of both. Replacement projects should be scoped to accommodate all program functions housed in the temporary space on a one-to-one basis and may include new/remodeled space for enrollment growth.

Campus capacity based upon ASF/FTE will change when the model is run with new data. A campus-wide projection of space needs is developed by applying the most recently reported campus mix of disciplines, levels, and types of instruction to the main campus academic year FTE projections. The space planning standards are applied to these detailed projections of FTE to project required space needs that are aggregated to campus space needs. The space requirements are compared to the space inventory to determine deficits or surpluses of space over the projection period. Deficits provide an indication of a need for a new space project.

Campus space deficits and surpluses are identified based upon FTE projected for future years and the assumption of a constant mix of disciplines, levels and types of instruction (the latest reported mix). While such an assumption is warranted to identify space deficit problems at the campus level, it is not necessarily the only assumption to be used in planning specific projects (for either new space or for the replacement of existing space).

Once the need for a project has been identified, each project must be treated uniquely. In particular, subject to regular review procedures, the campus must be allowed to deviate from its past experience in facility use and design the new project to accommodate: (1) newly approved academic programs, (2) changes in the mix of the level of instruction (lower division, upper division and graduate) and, especially, (3) changes in the mix of the types of instruction to be delivered (lecture, laboratory, mediated instruction, distributed learning, etc.).

The focus of the model is on-campus space needs. It is recognized that mediated instruction and distributed learning supported by electronic technology may fundamentally change these on-campus space needs during the next decade. The model will continue to evolve as the effects of these developing technologies upon capital needs (space and equipment) are more fully understood during the next decade.

The ASF/FTE Model

The ASF/FTE model is contained in an EXCEL workbook. The program calculates space needs by applying the existing space planning standards to a given FTE distributed over disciplines, levels and types of instruction to generate the total instructional space needs by campus. Once the ASF requirement is determined, the ASF/FTE required values are calculated directly.

California State University Capital Planning, Design and Construction ASF PER FTE MODEL USER GUIDE	Subject Restructuring Campus Capacities	Revision	
		Effective June 1998	

Model specifications:

1. The model includes all state funded facilities. The model includes an instructional sector and four sub-models to account for general administration, libraries, media, and plant operations. (The space types and associated codes that are included in the instructional sector model and the sub-models are provided in Appendix C.)
2. The instructional sector model uses the fall Course Section Report (CSR) data for campus total Full Time Equivalent Student (FTES) and FTES distributions over HEGIS disciplines and instructional types (lecture, lower division laboratory, upper division laboratory, graduate laboratory and total graduate FTE, for graduate research).
3. The instructional sector model also uses the fall Course Section Report data for campus total Full Time Equivalent Faculty (FTEF) and FTEF distribution over HEGIS disciplines.
4. The instructional sector model uses the Space and Utilization Standards approved in 1966 by the Coordinating Council for Higher Education (now California Postsecondary Education Commission), as modified in March 1971 and June 1973 to calculate the amount of required instructional and instructional support space in terms of ASF needed to accommodate the total FTES and FTEF identified in the CSR.
5. The instructional sector model uses the “Space Standards Chart” in the State University Administrative Manual (SUAM) for space formula multipliers for level, type, and category of instruction, for graduate research, for faculty and faculty administrative offices, and for miscellaneous shops and storage. (The chart is reproduced in Appendix D.)
6. The instructional sector model:
 - (a) uses CSU system averages for all but one discipline to calculate Instructional Activity ASF (see Appendix C for Use Codes assigned to this category) The exception is the instructional activity ASF added as a need to those campuses that have a Fine and Applied Arts program. These spaces include: little theaters, arena theaters, music practice rooms, choral rehearsal rooms, instrument rehearsal rooms, dance studios, etc. In order to adequately report the space need for the instructional activity ASF in the discipline of Fine and Applied Arts, a formula for the instructional activity ASF was derived by plotting the existing instructional activity ASF against the current campus FTE and

California State University Capital Planning, Design and Construction ASF PER FTE MODEL USER GUIDE	Subject Restructuring Campus Capacities	Revision	
		Effective June 1998	

applying linear regression to fit a straight line. Also, in addition to the above formula, the model adds a separate category for instructional activity ASF to campuses that have large auditoriums. In other words, for this category, existing ASF (large auditorium) equals the need.

(b) assumes the existing ASF inventory of space for Computer Access Work Stations is 100% of the need.

(c) uses SUAM, Section VII, 9619 for Indoor PE (see Appendix E)

All of the equations used in the instructional sector model are in EXCEL format (See Appendix F).

7. Separate ASF/FTE sub-models for administrative, library, media (including audio visual and related services, and educational TV), and plant operations space were developed in conjunction with the instructional sector model to provide a comprehensive evaluation of campus space needs and requirements. (The administrative space codes included in the four sub-models are shown in Appendix C, Table C-2.)

The Space and Facilities Data Base (SFDB) is used to collect existing space data (ASF) on these four categories of space for the sub-models. The space “need” for the sub-models is determined based upon existing standards or derived guidelines based upon the standards for programming these types of spaces as discussed below.

California State University Capital Planning, Design and Construction ASF PER FTE MODEL USER GUIDE	Subject Restructuring Campus Capacities	Revision	
		Effective June 1998	

General Administration: There are no existing up-to-date CSU space standards for general administration. The only space standards available are in the "Restudy" document issued by the McConnell Committee in 1955. These standards suggest substantially lower values of ASF/FTE than is shown in the existing SFDB inventory. This is understandable because of the many functional areas that have been added to General Administration since the Restudy standards were developed over forty years ago.

The space requirement for General Administration is identified by formula. Derivation of the formula was accomplished by plotting the existing campus ASF/FTE for General Administration against campus FTE and applying linear regression to fit a straight line (see Appendix G).

Libraries: Existing library standards (SUAM Section VI 9065) were approved by the Board of Trustees in September 1991. These standards were graphed in the same manner as the general administration standards (ASF/FTE vs. FTE enrollment). Since the standards do not contain library space recommendations for campuses below 8,000 FTE, ASF/FTE for this range was considered constant. ASF/FTE for campus sizes between 8,001 and 10,000 FTE and between 10,001-25,000 are derived from two linear equations fit to the standards. These formulas are the basis for the "required" space shown for libraries in Table 2. (Projects in this category are planned to add capacity up to 10 years in advance.) A graph plotting ASF/FTE against FTE illustrating the standards and the linear functions are provided in Appendix G.

Media: All media type space (HEGIS 90201, 90211, 90221, and 90231) is identified separately in the SFDB. The CSU does have space standards for these types of spaces (see SUAM Section VI 9066). These standards were used to determine campus media space needs.

Plant Operations: All plant operations space (Code 90501) is identified separately in the SFDB. Plant operations or corporation yard space standards are found in SUAM Section VI 9072. Here again, the space need can be represented by two linear lines, one for campuses up to 10,000 FTE, the other for 10,001-25,000 FTE. These linear functions are used to calculate the plant operations space need. (Projects in this category are planned to add capacity up to 10 years in advance.) A graph plotting ASF/FTE against FTE, illustrating the standards and the functions are provided in Appendix G.

The instructional sector and the four sub-models provide a comprehensive view of campus space needs. Although the sub-models are also stated in terms of ASF/FTE, it is important to

California State University Capital Planning, Design and Construction ASF PER FTE MODEL USER GUIDE	Subject Restructuring Campus Capacities	Revision	
		Effective June 1998	

understand that the direction of causation in the sub-models is from FTE to ASF. This direction cannot be reversed, i.e., an excess ASF in one of the sub-models does not simply imply that additional FTE could be accommodated. Such excess capacity might be converted to space to accommodate FTE, but the space would first have to be remodeled for instructional use.

To test the ASF/FTE model, the inventory of existing space from the SFDB is compared to the model output/space requirement needs. The results are shown in Tables 1, 2, 3, and 4.

Table 1 is the ASF summary by campus for all space categories for instructional use. The broad categories of space represented in the table are: lecture, laboratory, graduate research, instructional activity, faculty/faculty administrative, and existing unreported instructional space. Within these broad categories all support spaces are included. For example, the lecture category includes lecture, seminar, lecture activity and lecture service (see Appendix C, Table C-1 for the use codes included in the instructional sector model).

The summary comparisons of “required” and “existing” space make it apparent where a surplus or deficit exists within a broad category and are invaluable from the standpoint of identifying the problem areas for instructional space on a campus. To further identify where a surplus or a deficiency occurs within the instructional sector model, it is necessary to examine the detailed discipline comparisons provided by the model as shown in Appendix H.

Table 2 is the ASF summary by campus of the four separate sub-models: general administration, library, media space (including audio visual and related services, and educational TV), and plant operations. Here, as in Table 1, campus ASF and ASF/FTE is calculated as “required” for each of the four sub-model categories and compared to the “existing” space as reported through the SFDB. These four categories of space are FTE driven but they are not discipline oriented. They can be used independently to evaluate needs in each of the four categories. They can also be viewed as components of a total ASF/FTE model (instructional sector plus the four sub-models) to provide a complete and comprehensive basis for the evaluation of campus space needs.

Table 3 summarizes the campus totals from Table 1 and Table 2 for permanent ASF required in terms of the model as compared to the existing ASF shown in the SFDB. Table 3 also shows the “required” and “existing “ in terms of ASF/FTE.

IV Comparison of Campus Capacities Based Upon the ASF/FTE Approach with Capacity Based upon Existing Stations

Table 4 provides a comparison of campus FTE capacities calculated using the ASF/FTE approach (column 5) and capacities based upon spring 1997 station counts in the Space and Facilities Data Base (column 6). The data are also shown in terms of the resultant ASF/FTE (columns 7 and 8, respectively).

California State University Capital Planning, Design and Construction ASF PER FTE MODEL USER GUIDE	Subject Restructuring Campus Capacities	Revision	
		Effective June 1998	

For purposes of the comparison, both capacity definitions include FTE generated in the “other earned” category (this is basically non-scheduled instruction or instruction that is scheduled outside regular classrooms and class laboratories - it includes such activities as student teaching, graduate thesis, guided reading, and research projects).

The FTE input data for the ASF/FTE model includes this “other earned” FTE from the Course Section Report (CSR), fall 1996. The ASF output from the model, therefore, includes provision for “other earned” FTE, e.g., in terms of support space. In order to make a valid comparison between the model capacity values and the station capacity values, the station capacity values must be adjusted upward to include this “other earned” FTE. This is reasonable since “other earned” FTE is currently accommodated by each campus, but, traditionally not counted as part of the campus physical capacity.

**California State University
Capital Planning, Design and Construction
ASF PER FTE MODEL
USER GUIDE**

**Subject
Restructuring Campus
Capacities**

**Revision
Effective
June 1998**

Table 1 Campus Summary of Instructional Space - ASF/FTE

Campus	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Bakersfield	12,000	4,358	238	24,323	23,060	23,371	53,319	19,656	4,760	88,002	30,373	41,827	42,352	0	203,779	220,370	16,591	44.71	48.35	4,323
Chico	14,000	12,172	633	67,028	76,708	120,768	164,622	35,060	37,914	242,206	236,631	111,831	125,933	0	575,894	641,714	61,820	46.50	51.45	13,801
Dominatez Hills	20,000	7,824	406	45,871	48,382	25,703	43,026	45,993	6,366	133,232	102,367	70,773	45,296	0	330,438	248,637	-81,801	42.23	31.78	5,887
Fresno	25,000	14,935	747	80,225	86,357	123,282	252,232	43,702	28,233	250,782	254,332	130,422	106,156	0	640,513	758,576	118,063	43.00	50.33	17,641
Fullerton	20,000	16,128	738	34,105	115,267	143,932	257,493	61,627	28,206	251,553	232,266	142,283	148,270	0	633,566	801,502	107,936	41.46	47.31	13,331
Hayward	18,000	3,243	474	54,539	82,093	40,375	32,255	33,642	3,859	161,726	174,217	88,734	33,162	0	385,076	451,686	66,610	41.21	46.34	10,359
Humboldt	8,000	7,257	402	34,431	35,757	115,188	127,203	41,004	13,833	151,786	131,506	63,781	68,852	21,260	412,120	338,471	-13,719	56.80	54.31	7,016
Long Beach	25,000	20,318	936	110,530	133,287	224,410	367,070	123,204	120,703	372,737	358,453	167,147	206,700	63,895	939,078	1,250,114	252,036	43.12	61.53	25,443
Los Angeles	25,000	13,145	633	74,246	115,938	87,843	271,732	56,681	52,423	243,712	221,642	121,116	134,360	0	583,538	736,755	213,157	44.40	60.61	17,346
Monterey Bay	25,000	1,225	30	7,218	13,983	1153	11,640	3,758	0	30,586	27,510	15,324	33,133	0	58,633	32,272	33,633	47.86	75.31	1,328
Northridge	25,000	18,809	933	105,130	132,414	153,861	253,160	112,202	78,439	284,639	247,672	163,942	158,867	0	823,734	876,552	50,758	43.30	46.60	13,965
Pomona	20,000	13,493	740	76,332	80,123	147,215	165,198	51,207	23,148	273,343	240,520	123,334	106,414	136,815	677,431	752,218	74,787	50.21	55.75	14,983
Sacramento	25,000	18,058	307	100,439	125,315	120,674	180,083	110,525	23,512	307,195	207,372	141,218	161,003	12,743	780,112	716,034	-64,078	43.20	33.65	16,574
San Bernardino	12,000	3,228	488	52,536	61,006	43,527	107,096	64,884	13,576	187,214	175,581	87,675	103,368	0	435,836	464,227	28,391	47.23	50.31	3,829
San Diego	25,000	22,818	1,223	131,419	156,219	141,926	230,354	138,728	86,600	348,502	348,795	196,546	182,345	60,000	957,121	1,125,473	168,352	41.95	49.32	26,831
San Francisco	20,000	20,170	1,002	110,527	110,778	177,355	233,420	123,140	44,435	305,600	234,276	176,026	164,026	36,462	839,248	889,397	-9,851	44.58	44.09	13,349
San Jose	25,000	13,179	1,037	103,128	131,287	261,847	377,277	174,205	31,031	332,009	353,633	181,237	190,504	0	1,072,486	1,143,792	71,306	55.92	53.95	20,562
San Luis Obispo	15,000	15,640	806	81,102	31,145	304,656	462,866	58,112	8,064	405,575	344,203	141,022	150,267	0	990,467	1,056,545	66,078	63.33	67.55	16,683
San Marcos	25,000	3,207	201	18,875	14,330	5,320	15,050	6,664	11,148	17,461	20,228	35,120	22,645	41,104	83,440	124,505	41,065	26.02	38.82	4,786
Sosoma	10,000	5,860	318	31,252	32,847	33,501	71,439	17,223	3,433	106,341	110,538	55,827	52,320	0	252,150	271,227	19,077	43.03	46.28	6,304
Stanislaus	12,000	4,001	248	22,432	23,137	19,250	44,152	15,513	0	76,866	71,395	46,892	30,412	60,488	181,013	230,184	49,171	45.25	57.54	5,087
Totals	406,000	258,228	13,388	1,426,468	1,702,693	2,333,724	3,855,407	1,360,736	691,749	4,593,191	4,274,332	2,320,144	2,358,697	432,173	12,040,869	13,316,251	1,275,362	46.63	51.57	285,580
Sum of "e"s																				1,444,831
Sum of "e"s																				-163,449

Notes: Column 1 Master Plan enrollment ceiling FTE provided for information purposes. This total does not include 1,100 FTE ceiling at Maritime Academy.
 Column 2, CSR = Course Section Report. Data is fall 1996. FTEs include: "other" FTE. Off-campus centers (OCC) and special programs FTE are not separately identified in the CSR (except Calico and Mess Landing), Mission Viejo (PV), Contra Costa (RA), Yuba (MO), Coschella Valley (SE), Downtown (ST), and Stockton (ST) off-campus centers are excluded from this CSR FTEs total using the OCC FTEs from the Analytic Studies website, Table 4. "Total Off-Campus Center Full-Time Equivalent Students by Term, 1996-97 CY"
 Column 12-13, FOFAO = Faculty/Facility Admin. Offices.
 Column 14, Uninventoried ASF are facilities not on the SFDB (Space and Facilities Database). Uninventoried permanent instructional ASF only; other uninventoried ASF included in appropriate exist totals.
 Column 20, Instructional ASF/FTE Capacity FTEs is column 16, TOTAL Existing ASF, divided by column 18, ASF per FTE Required.
 "Existing" columns are SFDB (Space and Facility Database) Spring 1997 data for permanent ASF.

**California State University
Capital Planning, Design and Construction
ASF PER FTE MODEL
USER GUIDE**

**Subject
Restructuring Campus
Capacities**

Revision

Effective
June 1998

Campus	1	2	GENERAL ADMINISTRATION						LIBRARY			MEDIA, SUAM 9066			PLANT OPERATIONS, SUAM 9072			
			3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	Master Plan Enroll. FTEs	CSR FTEs TOTAL	Required GenAdm Space ASF	Existing GenAdm Space ASF	Met (+/-) ASF	Required GenAdm Space ASF/FTE	Required Library Space ASF	Existing Library Space ASF	Met (+/-) ASF	Required Library Space ASF/FTE	Required Media Space ASF	Existing Media Space ASF	Met (+/-) ASF	Required Media Space ASF/FTE	Required PlantOps Space ASF	Existing PlantOps Space ASF	Met (+/-) ASF	Required PlantOps Space ASF/FTE
Bakersfield	12,000	4,958	36,430	37,258	828	7.99	71,287	92,919	21,632	15.64	14,558	6,651	-7,907	3.19	19,627	15,774	-3,853	4.31
Chico	14,000	12,472	98,218	132,813	34,595	7.88	175,599	161,716	-13,883	14.08	22,472	0	-22,472	1.80	34,949	40,223	5,274	2.80
Dominguez Hills	20,000	7,824	62,157	51,595	-10,562	7.94	122,371	61,520	-60,851	15.64	17,824	9,449	-8,375	2.28	27,558	19,325	-8,233	3.52
Fresno	25,000	14,895	116,770	92,719	-24,051	7.84	209,721	145,673	-64,048	14.08	24,895	7,229	-17,666	1.67	38,852	11,698	-27,154	2.61
Fullerton	20,000	16,728	130,684	104,704	-25,980	7.81	235,526	259,381	23,855	14.08	26,728	15,359	-11,369	1.60	41,180	1,144	-40,036	2.46
Hayward	18,000	9,343	74,015	63,843	-10,172	7.92	146,127	130,662	-15,465	15.64	19,343	10,663	-8,680	2.07	29,502	25,795	-3,707	3.16
Humboldt	8,000	7,257	57,714	73,546	15,832	7.95	113,504	95,446	-18,058	15.64	17,257	5,939	-11,318	2.38	26,549	22,880	-3,669	3.66
Long Beach	25,000	20,318	157,653	129,992	-27,661	7.76	286,077	180,689	-105,388	14.08	30,318	10,084	-20,234	1.49	44,183	41,264	-2,919	2.17
Los Angeles	25,000	13,145	103,391	133,811	30,420	7.87	185,081	222,027	36,946	14.08	23,145	8,743	-14,402	1.76	36,128	3,377	-32,751	2.75
Monterey Bay	25,000	1,225	9,853	35,733	25,880	8.04	19,162	19,235	73	15.64	11,225	0	-11,225	9.16	5,881	5,518	-363	4.80
Northridge	25,000	18,809	146,365	121,827	-24,538	7.78	264,830	266,926	2,096	14.08	28,809	18,341	-10,468	1.53	43,172	50,689	7,517	2.30
Pomona	20,000	13,493	106,060	153,619	47,559	7.86	189,982	148,421	-41,561	14.08	23,493	14,040	-9,453	1.74	36,709	19,631	-17,078	2.72
Sacramento	25,000	18,058	140,719	142,604	1,885	7.79	254,253	234,500	-19,753	14.08	28,058	26,561	-1,497	1.95	42,533	30,796	-11,737	2.36
San Bernardino	12,000	9,228	73,116	105,408	32,292	7.92	144,323	134,383	-9,940	15.64	19,228	22,176	2,948	2.08	29,394	55,806	26,412	3.19
San Diego	25,000	22,818	176,206	212,531	36,325	7.72	321,275	343,591	22,316	14.08	32,818	31,249	-1,569	1.44	45,055	15,973	-29,082	1.97
San Francisco	20,000	20,170	156,550	141,237	-15,313	7.76	283,995	183,911	-100,084	14.08	30,170	10,933	-19,237	1.50	44,100	76,092	31,992	2.19
San Jose	25,000	19,179	149,139	93,284	-55,855	7.78	270,041	196,699	-73,342	14.08	29,179	12,077	-17,102	1.52	43,454	28,964	-14,500	2.27
San Luis Obispo	15,000	15,640	122,438	110,002	-12,436	7.83	220,211	164,062	-56,149	14.08	25,640	5,040	-20,600	1.64	39,863	4,284	-35,579	2.55
San Marcos	25,000	3,207	25,699	34,651	8,952	8.01	50,163	27,423	-22,740	15.64	13,207	0	-13,207	4.12	14,851	15,000	149	4.63
Sooma	10,000	5,860	46,726	27,227	-19,499	7.97	91,656	72,374	-19,282	15.64	15,860	8,863	-6,977	2.71	23,403	15,534	-7,869	3.99
Stanislaus	12,000	4,001	32,009	38,981	6,972	8.00	62,570	62,437	-133	15.64	14,001	5,768	-8,233	3.50	17,762	23,780	6,018	4.44
Totals	406,000	258,228	2,021,914	2,037,385	15,471		3,717,755	3,203,995	-513,760		468,228	229,185	-239,043		684,705	523,507	-161,198	
Sum of "+"s					241,539				106,917				2,948				77,363	
Sum of "-"s					-226,068				-620,677				-241,991				-238,561	

Notes: Column 1, Master Plan enrollment ceiling FTE provided for information purposes. The total does not include 1,100 FTE ceiling at Maritime Academy.
 Column 2, CSR = Course Section Report. Data is fall 1996. FTEs include "other" FTE. Off-campus centers (OCC) and special programs FTE are not separately identified in the CSR (except Calico and Moss Landing), Mission Viejo (FJ), Contra Costa (HA), Ventura (ND), Coachella Valley (SB), Downtown (SF), and Stockton (ST) off-campus centers are excluded from the CSR FTEs total using the OCC FTEs from the Analytic Studies website, Table 4 "Total Off-Campus Center Full-time Equivalent Students by Term, 1996-97 CY".
 "Existing" columns are SFDB (Space and Facility Database) Spring 1997 data for permanent ASF. For a facility not on the SFDB as of Spring 1997, the ASF is estimated and included in the appropriate existing total.

California State University
Capital Planning, Design and Construction
ASF PER FTE MODEL
USER GUIDE

Subject
Restructuring Campus
Capacities

Revision
Effective
June 1998

Table 3 Campus Summary of ASF/FTE Totals

Campus	1 Master Plan Enroll. FTEs	2 CSR FTEs TOTAL see notes	3 Required Total Permanent ASF	4 Existing Total Permanent ASF	5 Net (+/-) ASF	6 Require. Total Permanent ASF/FTE	7 Existing Total Permanent ASF/FTE
Bakersfield	12,000	4,558	345,681	372,372	27,291	75.84	81.93
Chico	14,000	12,472	911,131	976,466	65,335	73.06	78.30
Dominguez Hills	20,000	7,824	560,349	390,526	-169,823	71.62	49.91
Fresno	25,000	14,895	1,030,752	1,015,995	-14,857	69.20	68.20
Fullerton	20,000	16,728	1,127,685	1,182,090	54,405	67.41	70.67
Hayward	18,000	9,343	654,063	682,649	28,586	70.00	73.06
Humboldt	8,000	7,257	627,215	596,252	-30,963	86.43	82.16
Long Beach	25,000	20,318	1,516,309	1,612,143	95,834	74.63	79.35
Los Angeles	25,000	13,145	931,343	1,164,713	233,370	70.85	88.61
Monterey Bay	25,000	1,225	104,760	152,758	47,998	85.50	124.68
Northridge	25,000	18,809	1,308,970	1,334,335	25,365	69.59	70.94
Pomona	20,000	13,493	1,033,674	1,087,929	54,255	76.61	80.63
Sacramento	25,000	18,058	1,245,675	1,150,495	-95,180	68.98	63.71
San Bernardino	12,000	9,228	701,897	782,000	80,103	76.06	84.74
San Diego	25,000	22,818	1,532,476	1,728,817	196,341	67.16	75.77
San Francisco	20,000	20,170	1,414,063	1,301,570	-112,493	70.11	64.53
San Jose	25,000	19,179	1,564,299	1,480,806	-83,493	81.56	77.21
San Luis Obispo	15,000	15,640	1,398,619	1,339,933	-58,686	89.43	85.67
San Marcos	25,000	3,207	187,361	201,579	14,218	58.42	62.85
Sonoma	10,000	5,860	429,796	395,245	-34,551	73.34	67.44
Stanislaus	12,000	4,001	307,355	361,150	53,795	76.83	90.27
Totals	406,000	258,228	18,933,471	19,310,323	376,852	73.32	74.78
Sum of "+"s					976,896		
Sum of "-"s					-600,045		

Notes: Column 1, Master Plan enrollment ceiling FTE provided for information purposes. The total does not include 1,100 FTE ceiling at Maritime Academy.
Column 2, CSR = Course Section Report. Data is fall 1996. FTEs include "other" FTE. Off-campus centers (OCC) and special programs FTE are not separately identified in the CSR (except Calexico and Moss Landing). Mission Viejo (FJ), Contra Costa (HA), Ventura (ND), Coachella Valley (SB), Downtown (SF), and Stockton (ST) off-campus centers are excluded from the CSR FTEs total using the OCC FTEs from the Analytic Studies website.
Table 4 "Total Off-Campus Center Full-time Equivalent Students by Term, 1996-97 CY"
"Existing" columns are SFDB (Space and Facility Database) Spring 1997 data for permanent ASF.

**California State University
Capital Planning, Design and Construction
ASF PER FTE MODEL
USER GUIDE**

**Subject
Restructuring Campus
Capacities**

**Revision
Effective
June 1998**

Table 4 Campus Summary of Station Capacity vs. ASF/FTE Capacity

Campus	1 Master Plan Enroll. FTEs	2 CSR FTEs TOTAL <small>see notes</small>	3 Instructional TOTAL Required ASF	4 Instructional TOTAL Existing ASF	5 (5 = 4 / 7) Instructional ASF/FTE Capacity FTEs	6 Instructional Existing Station Capacity FTEs	7 (7 = 3 / 2) Instructional ASF per FTE Require.	8 (8 = 4 / 2) Instructional ASF per FTE Exist.	9 SFDB Spr 97 Existing Lec + Lab FTE Capacity	10 Fall 96 CSR Other Earned FTEs	11 (11 = 9*10) Other Earned FTEs based on 2
Chico	14,000	12,472	579,894	641,714	13,801	13,081	46.50	51.45	12,260	0.067	821
Domiguez Hills	20,000	7,824	330,438	248,637	5,887	7,374	42.23	31.78	6,950	0.061	424
Fresno	25,000	14,895	640,513	758,576	17,641	15,860	43.00	50.93	14,712	0.078	1,148
Fullerton	20,000	16,728	693,566	801,502	19,331	19,607	41.46	47.91	18,691	0.049	916
Hayward	18,000	9,343	385,076	451,686	10,959	11,899	41.21	48.34	11,300	0.053	599
Humboldt	8,000	7,257	412,190	398,471	7,016	7,259	56.80	54.91	6,522	0.113	737
Long Beach	25,000	20,318	998,078	1,250,114	25,449	24,261	49.12	61.53	22,909	0.059	1,352
Los Angeles	25,000	13,145	583,598	796,755	17,946	17,086	44.40	60.61	16,043	0.065	1,043
Monterey Bay	25,000	1,225	58,639	92,272	1,928	2,375	47.86	75.31	2,199	0.080	176
Northridge	25,000	18,809	825,794	876,552	19,965	22,271	43.90	46.60	20,951	0.063	1,320
Pomona	20,000	13,493	677,431	752,218	14,983	13,827	50.21	55.75	13,206	0.047	621
Sacramento	25,000	18,058	780,112	716,034	16,574	21,529	43.20	39.65	19,934	0.080	1,595
San Bernardino	12,000	9,228	435,836	464,227	9,829	10,308	47.23	50.31	9,634	0.070	674
San Diego	25,000	22,818	957,121	1,125,473	26,831	25,092	41.95	49.32	23,874	0.051	1,218
San Francisco	20,000	20,170	899,248	899,397	19,949	19,092	44.58	44.09	17,893	0.067	1,199
San Jose	25,000	18,179	1,072,486	1,149,792	20,562	21,526	55.92	59.95	20,155	0.068	1,371
San Luis Obispo	15,000	15,640	990,467	1,056,545	16,683	15,923	63.33	67.55	15,079	0.056	844
San Marcos	25,000	3,207	83,440	124,505	4,766	3,196	26.02	38.82	2,984	0.071	212
Sonoma	10,000	5,860	252,150	271,227	6,304	5,916	43.03	46.28	5,368	0.102	548
Stanislaus	12,000	4,001	181,013	230,184	5,087	5,542	45.25	57.54	5,117	0.083	425
Totals	406,000	258,228	12,040,869	13,316,251	285,580	287,956	46.63	51.57	270,333		17,623

Notes: Column 1, Master Plan enrollment ceiling FTE provided for information purposes. The total does not include 1,100 FTE ceiling at Maritime Academy.
 Column 2, CSR = Course Section Report. Data are fall 1996. FTEs includes "other" FTE. Off-campus center and special programs FTE are not separately identified in the CSR (except Calisteco and Moss Landing). Off-campus centers FTEs are not included in FTEs total.
 Off-campus Center FTEs are from the Analytic Studies website, Table 4 "Total Off-Campus Center Full-time Equivalent Students by Term, 1996-97 CY."
 Column 5 "ASF/FTE Capacity FTEs" is column 4 "Instructional TOTAL Existing ASF" divided by column 7 "ASF per FTE Require".
 Column 7 "Instructional ASF per FTE Require" is column 3 "Instructional TOTAL Required ASF" divided by column 2 "CSR FTEs TOTAL".
 Column 8 "Instructional ASF per FTE Exist" is column 4 "Instructional TOTAL Existing ASF" divided by column 2 "CSR FTEs TOTAL".
 "Existing" columns are SFDB (Space and Facility Database) Spring 1997 data for permanent ASF.
 Column 9, Existing Station Count FTE Capacity is the total SFDB station count capacity increased by the percentage of "other" from Fall 96 CSR.

California State University Capital Planning, Design and Construction ASF PER FTE MODEL USER GUIDE	Subject Restructuring Campus Capacities	Revision	
		Effective June 1998	

Appendix A

Facilities Planning in the California State University, Background

The objective of the annual Capital Outlay Program budget for the California State University is to provide facilities appropriate to the CSU's approved educational programs, to create environments conducive to learning, and to ensure that the quality and quantity of facilities at all campuses serve the students equally well. The proposals are based upon the following principles:

1. Approved Academic Master Plans

The Board of Trustees has adopted planning policies designed to promote orderly curricular development, guide the distribution of programs in the system, and facilitate the progress of each campus in fulfilling the mission of the CSU as expressed in the statewide master plan for higher education.

2. Approved Campus (Physical) Master Plans

The Board requires that every campus have a physical master plan, showing existing and anticipated facilities necessary to accommodate specified levels of enrollment, in accordance with approved educational policies and objectives. Each campus master plan reflects the ultimate physical requirements of academic programs and auxiliary activities.

A related element, adopted by the Board separate from the physical master plan, is the campus enrollment ceiling that specifies the maximum FTE for each campus at build-out.

3. Annual full-time Equivalent Student (FTE) Projections

The program is based on the annual full-time equivalent student enrollment projections, which are prepared by the Chancellor's Office, in consultation with the campuses and taking into account the statewide demographic projections prepared by the Population Research Unit of the California Department of Finance. The annual FTE enrollment projections reflect the impact of year-round operations at Hayward, Los Angeles, Pomona, and San Luis Obispo, in accordance with Trustee policy.

4. Approved Space and Utilization Standards

Instructional space needs are calculated in conformity with space and utilization standards approved in 1966 by the Coordinating Council for Higher Education (now the California Postsecondary Education Commission), as modified in March 1971 and June 1973. (Detail on these standards is provided below.)

California State University Capital Planning, Design and Construction ASF PER FTE MODEL USER GUIDE	Subject Restructuring Campus Capacities	Revision	
		Effective June 1998	

Appendix A

5. Space and Facilities Data Base (SFDB)

Needs for instructional capacity to be addressed by the Capital Outlay Program are identified by comparing campus FTE projections with the campus capacity to accommodate FTE based upon classroom and laboratory spaces reported in the Space and Facilities Data Base.

Within this general context, the capital outlay budget addresses all aspects of campus needs for physical plant in addition to direct instructional facilities. This includes libraries, computing and communications facilities and infrastructure, utilities, administrative and various support facilities, and circulation. Projects for facility remodeling or rehabilitation, disabled access, earthquake retrofit, and asbestos abatement are also part of the budget process.

California State University Capital Planning, Design and Construction ASF PER FTE MODEL USER GUIDE	Subject Restructuring Campus Capacities	Revision	
		Effective June 1998	

Appendix B

Utilization of Instructional Space in the CSU, 1993

Classroom and Class Laboratory Utilization

Based on the Fall 1993 Utilization Report all campuses were below the standard of 35 weekly student contact hours (WSCH) per station for classroom utilization. This pattern of low scheduled hours and high occupancy rate has been found in previous utilization analyses.

The figures for class laboratories are mixed. Two campuses exceeded the lower division standard of 23.4 WSCH per station and six exceeded the upper and graduate divisions standard of 17.6 WSCH per station, although the use of the laboratories as lecture rooms may have contributed to these achievements, as evidenced by the extremely high station occupancy percentages. The use of laboratories for lecture classes is not uncommon nor improper. It is entirely appropriate to use this empty space for any class it may serve.

Use of Other Space

Significant amounts of space classified as other than classroom or class laboratory is used to teach lecture and laboratory classes. The data show that of the 3,359,985 WSCH conducted in lecture and laboratory modes of instruction and held in permanent space, 315,288 WSCH (9.4%) were taught in space other than classrooms or class laboratories. It is evident that classes of all modes were held in almost all classifications of space.

On average the system produced almost 20 percent of the fall, 1993, FTE outside of classrooms and class laboratories. The percentages range from a low of 9.3 percent at San Marcos (a very young campus) to a high of 26.0 percent at San Bernardino. (The 45.3 percent figure for San Francisco may be attributed to that campus's program of rehabilitation of older instructional facilities to bring them up to modern instructional needs, causing the campus to schedule classes into non-instructional space.)

California State University Capital Planning, Design and Construction ASF PER FTE MODEL USER GUIDE	Subject	Revision	
	Restructuring Campus Capacities	Effective June 1998	

Appendix D

SPACE STANDARDS CHART

General Subject Field	Teaching Laboratories asf/100 wsch*	Teaching Laboratories asf/station**	Graduate Research Labs asf/Grad. Stu.***	Faculty Offices asf/Fac. FTE	Faculty Admin. asf/Fac. FTE	Misc. Shops & Storage
Agriculture			150	110	40	10%
LD	255	60				
UD	341	60				
Biological Science			120	110	35	10%
LD	237	55				
UD	341	60				
Physical Science			120	110	35	10%
LD	255	60				
UD	400	70				
Engineering			150	110	40	15%
LD	387	91				
UD	628	111				
Mathematics			23	110	25	5%
LD	127	30				
UD	173	30				
Psychology			72	110	30	7.5%
LD	173	40				
UD	341	60				
Anthropology			71	110	30	7.5%
LD	182	43				
UD	257	45				
Geography			71	110	30	7.5%
LD	182	43				
UD	257	45				
Other Social Sciences			23	110	25	5%
LD	127	30				
UD	173	30				
Art			105	110	25	10%
LD	278	65				
UD	369	65				
Fine Arts			105	110	25	10%
LD	257	60				
UD	455	80				
Other Humanities			23	110	25	5%
LD	173	40				
UD	228	40				
Bus. Admin. & Econ.			23	110	33	7%
LD	127	30				
UD	173	30				

California State University Capital Planning, Design and Construction ASF PER FTE MODEL USER GUIDE	Subject Restructuring Campus Capacities	Revision	
		Effective June 1998	

Appendix D

SPACE STANDARDS CHART

General Subject Field	Teaching Laboratories asf/100 wsch*	Teaching Laboratories asf/station**	Graduate Research Labs asf/Grad. Stu.***	Faculty Offices asf/Fac. FTE	Faculty Admin. asf/Fac. FTE	Misc. Shops & Storage
Education			23	110	50	10%
LD		0				
UD	228	40				
Home Economics			23	110	50	10%
LD	255	60				
UD	341	60				
Industrial Arts			113	110	30	15%
LD	290	68				
UD	471	83				
Journalism			23	110	50	10%
LD	255	60				
UD	341	60				
Health Science			23	110	50	10%
LD		0				
UD	287	51				
Other Professions			23	110	50	10%
LD	168	39				
UD	285	50				
Classroom & Seminar						
LD	43	15				
UD	43	15				
Grad	43	15				

***To derive ASF per 100 weekly student credit (contact) hours:**

ASF per 100 weekly student credit (contact) hours is derived by dividing ASF per station by the utilization standards (23.4 for lower division and 17.6 for upper division) and multiplying the result by 100.

Example: Art - LD: $65/23.4 \times 100 = 278$ ASF

****To derive ASF per station:**

*ASF per station is derived by dividing the asf/100 wsch by 100 and multiplying the result by the utilization standards for laboratories, i.e., 23.4 for lower division and 17.6 for upper division.

Example: Art - LD: $278/100 \times 23.4 = 65$

***Graduate Students = $\frac{\text{Graduate FTE Weekly Student Credit Hours (15)}}{\text{Average Weekly}}$

Average Weekly

Source: Physical Planning and Development, SUAM VI-9512/1&&2, Appendix A

California State University Capital Planning, Design and Construction ASF PER FTE MODEL USER GUIDE	Subject Restructuring Campus Capacities	Revision	
		Effective June 1998	

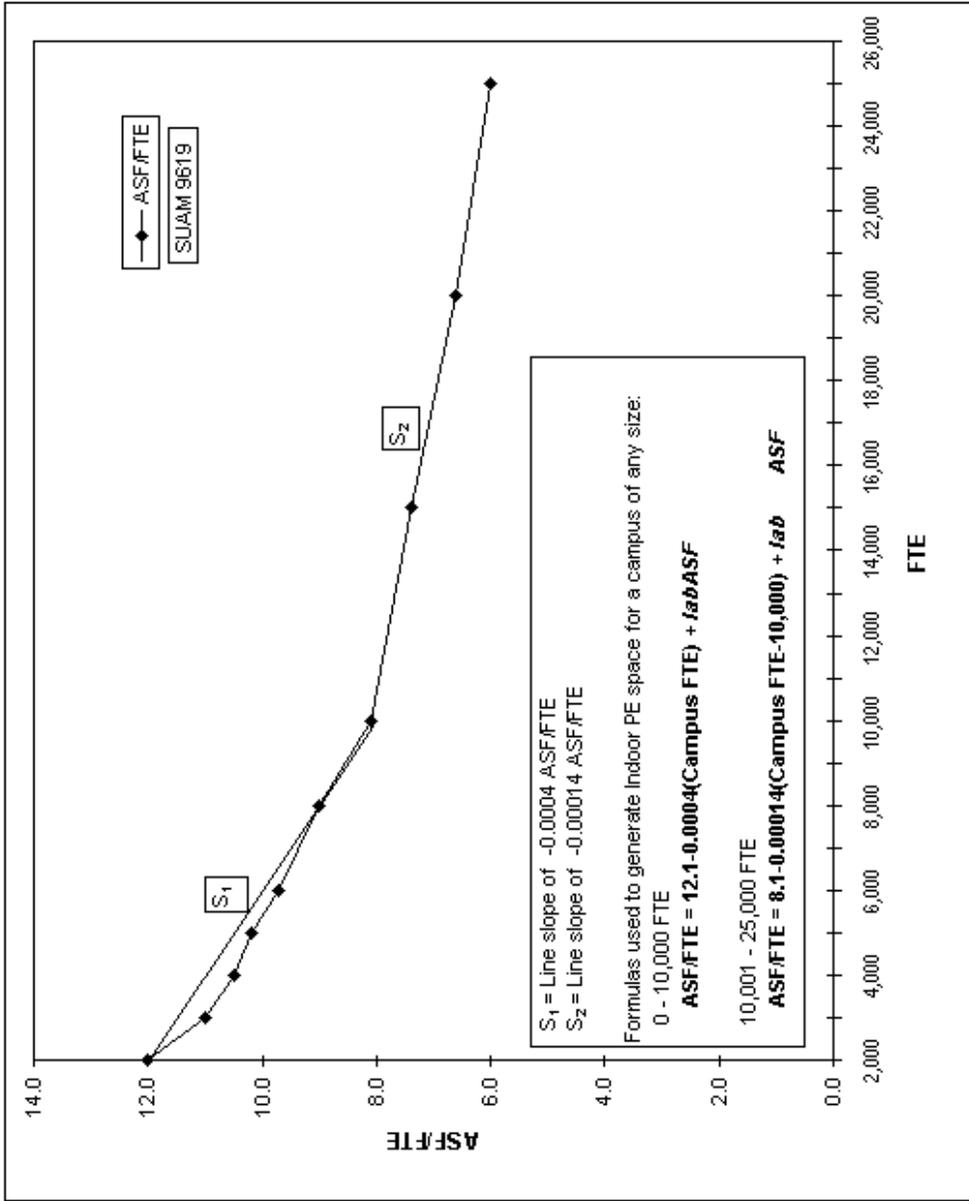
Appendix E

Equations used for Indoor Physical Education

The Indoor PE standards set forth in SUAM Section VII 9619 are used to program Indoor PE space. Graphically the SUAM standards for Indoor PE are not exactly linear. For the purposes of the model input, the Fall 1994 CSR enrollment was used. A best-fit linear representation was used to write simple formulas for any campus size. The formula need follows the standards except for campus sizes less than 8,000 FTE and in this area the reported need will be slightly more than the standard. Indoor PE space requirements are included in the ASF/FTE model under Instructional Activity in Table 1 of this report. See the Indoor PE graph and SUAM standards on the next page below.

California State University Capital Planning, Design and Construction ASF PER FTE MODEL USER GUIDE	Subject Restructuring Campus Capacities	Revision	
		Effective June 1998	

Indoor Physical Education Space Standards



Appendix E

California State University
Capital Planning, Design and Construction
ASF PER FTE MODEL
USER GUIDE

Subject
Restructuring Campus
Capacities

Revision
Effective
June 1998

Equations Used in the Instructional Sector Model

THE CALIFORNIA STATE UNIVERSITIES
COURSE SECTION REPORT FOR FALL 1996 CC 25 Fresno

CHANCELLOR'S OFFICE
PGM APD53

REGIS DISCIPLINE CATEGORY - 01 Agriculture

DATE: 04/13/97
JOB: APD53

PAGE 25-32

LEVEL	FTE	FTE/FTE	FTE/FTF	FTE/FTF	SCUPT/FTE	LECTURE	PCT	LABORATORY	PCT	ACTIVITY-LECT	PCT	ACTIVITY-LAB	PCT	INDEP STUDY	PCT	OTHER NON-CAP	PCT	TOTAL	CATG	LEVEL	CAMP
LOWER DIV.	138.53	79.4	15.03	11.6	2.40	1.4	13.93	8.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	173.93	40.2	2.7	1.2	
	4.415	66.8	1.606	24.9	0.00	0.00	0.992	9.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.613	29.0	3.0	0.9	
	31.38	11.33	11.33	0.00	0.00	0.00	23.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.30				
	470.67	178.19	352.45	0.00	0.00	0.00	352.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	394.53				
UPPER DIV.	193.40	77.4	31.23	13.4	0.00	0.00	0.00	23.53	9.5	2.815	19.4	0.00	0.00	0.00	0.00	0.00	248.20	57.4	3.2	1.7	
	8.478	58.3	3.250	26.2	0.00	0.00	8.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.543	63.9	3.5	2.0	
	32.81	9.62	144.31	0.00	0.00	0.00	125.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.07				
	342.18	144.31	0.00	0.00	0.00	0.00	125.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	256.00				
UNDRGRD DIV.	331.93	78.6	50.33	12.7	2.40	0.6	13.93	3.3	23.53	5.6	0.00	0.00	0.00	0.00	0.00	0.00	422.13	97.6	3.0	2.8	
	12.893	60.9	4.855	25.8	0.00	0.00	2.815	13.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.156	92.9	3.3	2.9	
	25.75	10.37	155.51	0.00	0.00	0.00	23.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.95				
	386.18	155.51	352.45	0.00	0.00	0.00	352.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	299.30				
GRAD DIV.	6.93	61.5	0.83	10.0	0.00	0.00	0.00	2.67	26.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.21	2.4	1.2	0.1	
	1.014	62.8	0.067	12.8	0.00	0.00	0.00	0.923	32.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.814	7.1	1.8	0.2	
	6.84	9.94	149.25	0.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.36				
	102.36	149.25	0.00	0.00	0.00	0.00	75.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	95.42				
ALL DIV.	338.33	78.4	51.00	12.1	2.40	0.6	13.93	3.2	26.20	6.1	0.00	0.00	0.00	0.00	0.00	0.00	432.43	100.0	2.9	2.9	
	13.907	61.1	4.920	25.2	0.00	0.00	0.992	2.6	3.348	14.7	0.00	0.00	0.00	0.00	0.00	0.00	23.372	100.0	3.1	3.1	
	24.37	10.36	155.42	0.00	0.00	0.00	23.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.99				
	365.50	155.42	352.45	0.00	0.00	0.00	352.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	284.85				

THE CALIFORNIA STATE UNIVERSITIES
COURSE SECTION REPORT FOR FALL 1996 CC 25 Fresno

CHANCELLOR'S OFFICE
PGM APD53

REGIS DISCIPLINE CATEGORY - 01 Agriculture

DATE: 04/13/97
JOB: APD53

PAGE 25-185

LEVEL	FTE	FTE/FTE	FTE/FTF	FTE/FTF	SCUPT/FTE	LECTURE	PCT	LABORATORY	PCT	ACTIVITY-LECT	PCT	ACTIVITY-LAB	PCT	INDEP STUDY	PCT	OTHER NON-CAP	PCT	TOTAL	CATG	LEVEL	CAMP
LOWER DIV.	5436.20	85.9	194.00	3.1	7.87	0.1	482.67	7.6	48.33	0.9	159.27	2.5	6,326.33	42.5	100.0	0.0	42.5				
	159.914	70.5	24.898	11.0	0.736	0.3	29.941	13.2	3.286	1.4	6.028	3.5	226.853	30.7	100.0	0.0	30.7				
	33.99	7.79	116.88	0.00	10.01	0.00	16.12	14.71	19.87	0.00	0.00	0.00	27.90				27.90				
	509.92	116.88	0.00	0.00	150.13	0.00	241.81	220.63	247.58	0.00	0.00	0.00	418.44								
UPPER DIV.	6,352.47	82.7	177.87	2.3	12.73	0.2	407.20	5.3	518.87	6.8	213.40	2.8	7,632.53	51.6	100.0	0.0	51.6				
	274.187	65.1	28.640	6.8	1.073	0.3	33.345	7.9	51.845	12.3	32.400	7.7	421.489	57.1	100.0	0.0	57.1				
	23.17	6.21	6.21	0.00	11.87	0.00	12.21	10.01	6.59	0.00	0.00	0.00	18.23				18.23				
	347.53	93.16	93.16	0.00	178.01	0.00	183.18	150.12	98.80	0.00	0.00	0.00	273.41								
UNDRGRD DIV.	11,798.67	84.1	371.87	2.7	20.60	0.1	898.87	6.4	557.20	4.0	372.67	2.7	14,010.87	94.1	100.0	0.0	94.1				
	454.101	67.0	53.837	8.3	1.888	0.3	62.336	9.8	55.120	8.5	40.829	6.2	643.342	87.8	100.0	0.0	87.8				
	27.16	6.85	111.09	0.00	14.06	0.00	14.06	14.06	9.22	0.00	0.00	0.00	21.81				21.81				
	407.35	104.19	0.00	0.00	166.31	0.00	210.92	154.33	138.27	0.00	0.00	0.00	324.15								
GRAD DIV.	622.13	70.4	7.47	0.8	0.00	0.00	45.47	5.1	208.40	23.6	0.67	0.1	884.13	5.9	100.0	0.0	5.9				
	50.929	56.6	1.874	2.1	0.000	0.000	3.743	4.2	33.279	37.0	0.139	0.2	89.963	12.2	100.0	0.0	12.2				
	12.22	3.98	0.00	0.00	0.00	0.00	12.15	6.26	6.26	0.00	0.00	0.00	9.83				9.83				
	183.24	59.77	0.00	0.00	182.21	0.00	182.21	92.93	71.94	0.00	0.00	0.00	147.42								
ALL DIV.	12,410.80	82.3	379.23	2.5	20.60	0.1	935.33	6.3	775.60	5.2	373.33	2.5	14,895.00	100.0	100.0	0.0	100.0				
	485.030	65.7	55.411	7.5	1.888	0.3	67.029	9.1	88.409	12.0	40.568	5.5	738.305	100.0	100.0	0.0	100.0				
	25.59	6.85	11.09	0.00	13.95	0.00	13.95	8.77	9.20	0.00	0.00	0.00	20.17				20.17				
	383.82	102.69	0.00	0.00	166.31	0.00	209.31	131.59	138.04	0.00	0.00	0.00	305.62								

Example:

All Lecture FTEs + Total Category FTEs - (338.87 * 2.4) + 432.4 - 0.7892

Total Grad FTEs + Total Category FTEs - 10.27 + 432.4 - 0.0238

Total Category FTEs + Total Campus FTEs - 432.4 + 14895 - 0.0290

Total Category FTEs + Total Campus FTEs - 22.77 + 738.305 - 0.0308

Total Campus FTEs - 14895

Total Campus FTEs - 738.305

Made: %LevelFTEs + Total Category FTEs - LD Lab + Tot Cat FTEs - 19.07 + 432.4 - 0.0441

Made: %LevelFTEs + Total Category FTEs - LD Act Lab + Tot Cat FTEs - 15.93 + 432.4 - 0.0332

Made: %LevelFTEs + Total Category FTEs - UD Lab + Tot Cat FTEs - 31.27 + 432.4 - 0.0723

Made: %LevelFTEs + Total Category FTEs - UB Act Lab + Tot Cat FTEs - 0 + 432.4 - 0

Made: %LevelFTEs + Total Category FTEs - Grad Lab + Tot Cat FTEs - 67 + 432.4 - 0.0015

Made: %LevelFTEs + Total Category FTEs - Grad Act Lab + Tot Cat FTEs - 0 + 432.4 - 0

Equations Used in the Instructional Sector Model

(Example Data for Fresno, 01-Agriculture & Natural Resources)

	K	L	M	N
7				
8				
9				
10				
11				
12	$=B3 * 0.029 * 0.0015$	$=B3 * 0.029 * 0.0238$	$=F12 * 0.3 * 255 = G12$	$=G12 * 0.3 * 341$
	$=\text{Campus Total FTES} * (\text{Category Total FTES} / \text{Campus Total FTES})$ $(\text{Grad Lab FTES} / \text{Category Total FTES})$	$=\text{Campus Total FTES} * (\text{Category Total FTES} / \text{Campus Total FTES})$ $(\text{L.D. Lab FTES} / \text{Category Total FTES})$	$=\text{LD Act Lab FTES} * (\text{WSCH}/100) * \text{Space Standard} = \text{UD Act Lab FTES} * (\text{WSCH}/100) * \text{Space Standard}$ SUAM	$=\text{UD Act Lab FTES} * (\text{WSCH}/100) * \text{Space Standard}$ SUAM

	O	P	Q	R
7				
8				
9				
10				
11				
12	$=H12 * 0.3 * 341$	$=I12 * 0.45 * 255$	$=J12 * 0.45 * 341$	$=K12 * 0.45 * 341$
	$=\text{Grad Act Lab FTES} * (\text{WSCH}/100) * \text{Space Standard} = \text{LD Lab FTES} * (\text{WSCH}/100) * \text{Space Standard} = \text{Grad Lab FTES} * (\text{WSCH}/100) * \text{Space Standard}$ SUAM	$=\text{LD Lab FTES} * (\text{WSCH}/100) * \text{Space Standard} = \text{LD Lab FTES} * (\text{WSCH}/100) * \text{Space Standard}$ SUAM	$=\text{LD Lab FTES} * (\text{WSCH}/100) * \text{Space Standard} = \text{LD Lab FTES} * (\text{WSCH}/100) * \text{Space Standard}$ SUAM	$=\text{Grad Lab FTES} * (\text{WSCH}/100) * \text{Space Standard}$ SUAM

	S	T	U	V	W
7					
8					
9					
10					
11					
12	$=L12 * 1.875 * 150$	$=M12 + N12 + D12 + P12 + Q12 + R12$	$=25,837$	$=S12$	$=2,032$
	$=\text{Grad Total FTES} * (\text{WSCH}/100) * \text{Space Standard}$ SUAM	$=\text{Sum of Lab ASF}$	SFDB data	$=\text{Grad Total ASF}$	SFDB data

Equations Used in the Instructional Sector Model

(Example Data for Fresno, 01-Agriculture & Natural Resources)

	X	Y	Z	AA	AB
7	Require. Category Instr Act ASF	Require. Category Other Instr Act ASF	Require. Category TOTAL Instr Act ASF	Exist. Category Lrg Act Instr Act ASF	Exist. Category TOT Instr Act minus Lrg Act ASF
8	$T12 + V12$				
9	$T12 + V12$				
10	$T12 + V12$				
11	$T12 + V12$				
12	$(E12 + T12 + V12) \cdot 0$	**Categories that follow the basic equation	$= X12$	$= Y12$	

$=$ [Require. Category Lecture ASF + Require. Category Total Lab ASF + Require. Category Grad Resch ASF] * Factor

**08 PE, Indoor PE; (SUAM 9619). See Appendix E
 **10 F&A, Large Awd; Required ASF = Existing ASF
 **Self-instruct Cmpt; Required ASF = Existing ASF
 *Instructional Activity (Instr Act) formerly referred to as noncapacity.

25% used for Instr Act ASF calculation, except for:
 Agriculture use 0%
 Bio & Physical Sciences use 37%
 Engineering use 41%
 08 PE, Fine & Applied Arts Lrg Awd, & Self-Instr Cmpt (see next column)

	AC	AD	AE	AF	AG	AH	AI
7	Require. Category TOTAL FOFAO ASF	Exist. Category TOTAL FOFAO ASF	Require. Category TOTAL ASF	Exist. Category TOTAL ASF	Met (- / -) ASF	Require. Category ASF per FTE	Exist. Category ASF per FTE
8	175	$5,186$	$T12 + V12 + Z12 + AC12$	$= U12 + W12 + AA12 + AB12 + AD12$	$= BC12$	$= BB12$	$= BC12$
9	175	$5,186$	$T12 + V12 + Z12 + AC12$	$= U12 + W12 + AA12 + AB12 + AD12$	$= BC12$	$= BB12$	$= BC12$
10	175	$5,186$	$T12 + V12 + Z12 + AC12$	$= U12 + W12 + AA12 + AB12 + AD12$	$= BC12$	$= BB12$	$= BC12$
11	175	$5,186$	$T12 + V12 + Z12 + AC12$	$= U12 + W12 + AA12 + AB12 + AD12$	$= BC12$	$= BB12$	$= BC12$
12	$= B4$	$= 5,186$	$= T12 + V12 + Z12 + AC12$	$= U12 + W12 + AA12 + AB12 + AD12$	$= BC12$	$= BB12$	$= BC12$

Appendix F

California State University Capital Planning, Design and Construction ASF PER FTE MODEL USER GUIDE	Subject Restructuring Campus Capacities	Revision	
		Effective June 1998	

Appendix G

Equations used in the Sub-Models

General Administration:

The CSU does not have any overall standards for General Administration. SUAM Section VII 9611 does set forth office standards for representative positions by level and category. A best-fit linear representation was used to determine the General Administration requirement for any campus size. General Administration space comparisons of ASF/FTE “required” versus existing are shown in Table 2 of this report. See the General Administration graph and SUAM standards below.

Libraries:

Library standards in SUAM Section VII 9614 are used to program library space. Graphically the SUAM standards for Library are linear between 8,001 and 10,000 FTE and 10,001 and 25,000 FTE. For the purposes of the model, the ASF/FTE for a campus with an enrollment between 0 and 8,000 FTE was considered constant at 15.64 ASF/FTE. Linear formulas were derived to determine the library space needs for any size campus. Library space ASF/FTE “required” compared to existing are shown in Table 2 of this report. A graph and table illustrating the library standards are provided below.

Media (Multimedia, Instructional Development, and Audio Visual space):

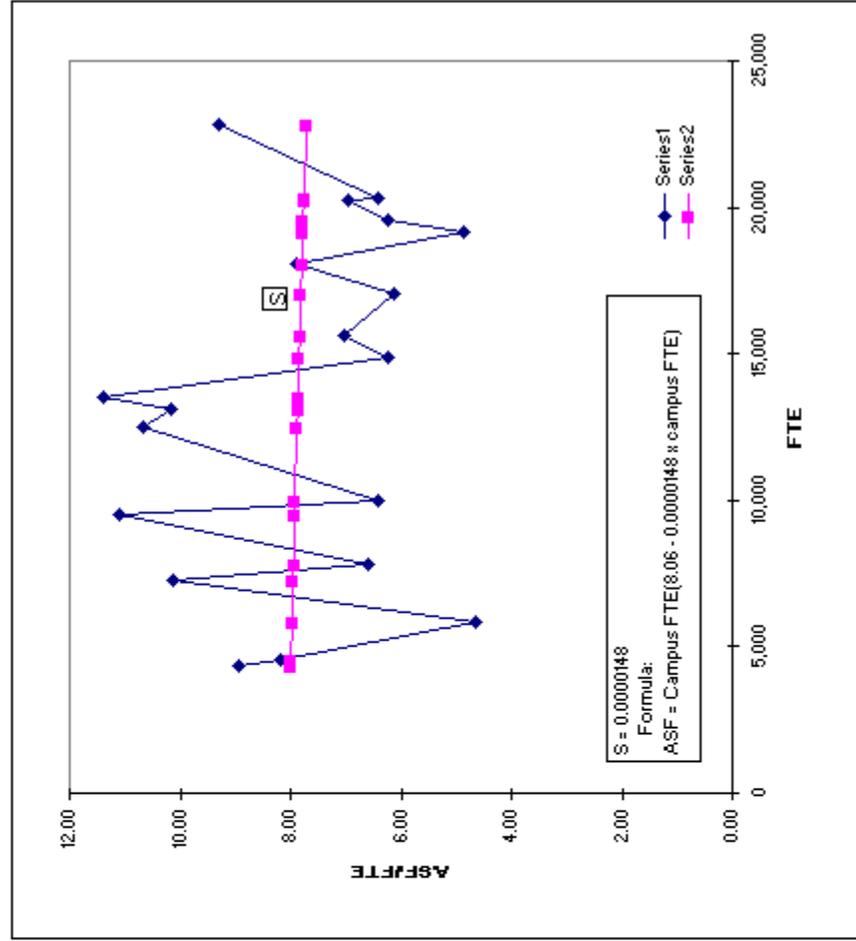
Media standards in SUAM Section VII 9614.01 were used to determine the space needs in this category for each campus.

Plant Operations/Corporation Yard:

Corporation Yard standards set forth in SUAM Section VII 9620 are used in programming this type of space. Graphically the Corporation Yard standards are not exactly linear. For the purposes of the ASF/FTE model linear formulas were derived to calculate Plant Operations/Corporation Yard space requirement for any size campus. These ASF/FTE requirements compared to existing space are shown in Table 2 of this report. A graph and table illustrating the standards are provided below.

California State University Capital Planning, Design and Construction ASF PER FTE MODEL USER GUIDE	Subject Restructuring Campus Capacities	Revision	
		Effective June 1998	

General Administration
 FORMULA DERIVATION BY LINEAR REGRESSION

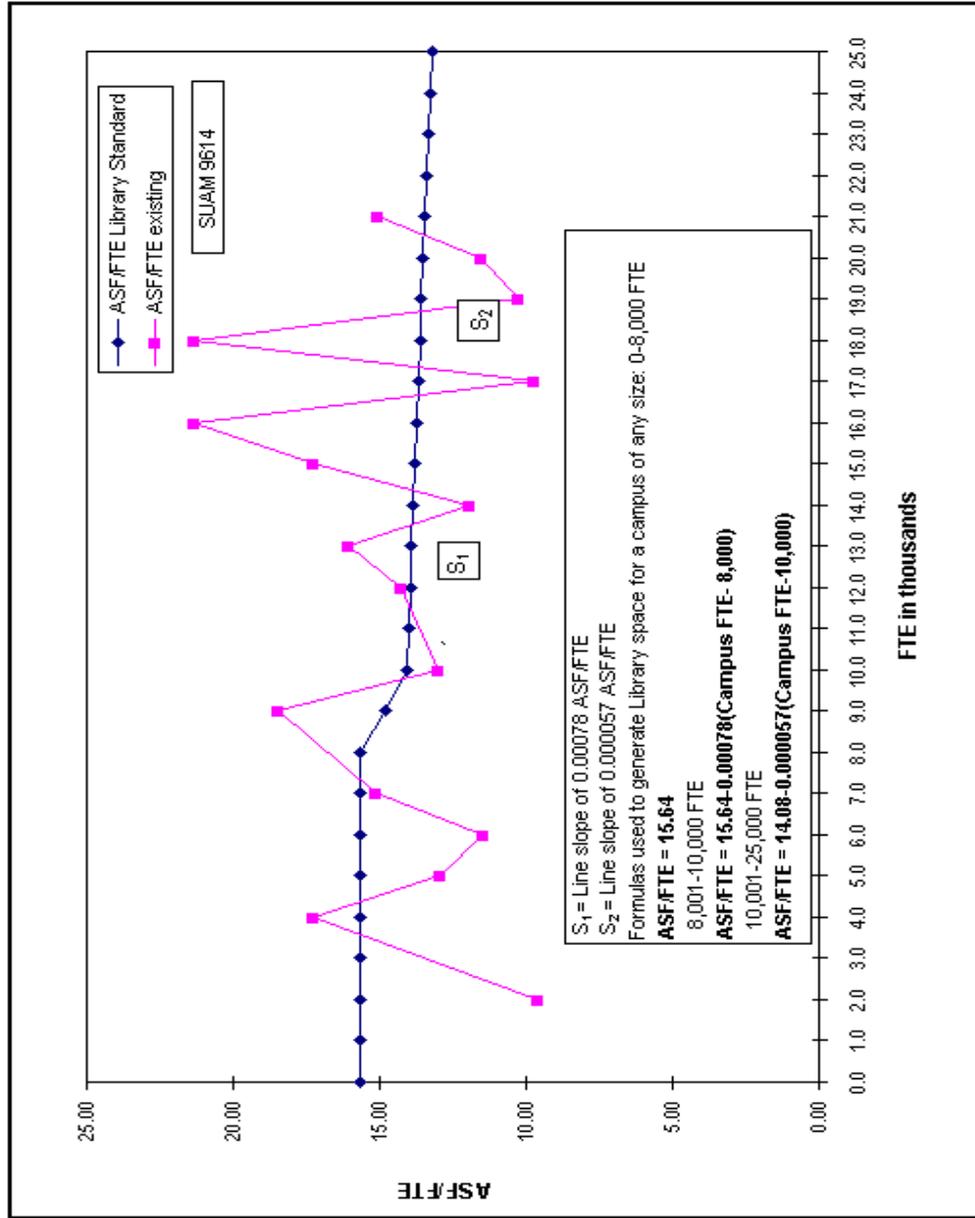


Campus	FTEs	Series 1 Actual ASF/FTE	Series 2 Lineest ASF/FTE	Existing GenAdm ASF
Stanislaus	4,365	8.93	8.00	38,981
Bakersfield	4,558	8.17	7.99	37,258
Sonoma	5,860	4.65	7.97	27,227
Humboldt	7,257	10.13	7.95	73,546
Dominguez Hills	7,824	6.59	7.94	51,595
San Bernardino	9,493	11.10	7.92	105,408
Hayward	9,966	6.41	7.91	63,843
Chico	12,472	10.65	7.88	132,813
Los Angeles	13,145	10.18	7.87	133,811
Pomona	13,493	11.39	7.86	153,619
Fresno	14,895	6.22	7.84	92,719
San Luis Obispo	15,640	7.03	7.83	110,002
Fullerton	17,044	6.14	7.81	104,704
Sacramento	18,058	7.90	7.79	142,604
San Jose	19,179	4.86	7.78	93,284
Northridge	19,550	6.23	7.77	121,827
San Francisco	20,256	6.97	7.76	141,237
Long Beach	20,318	6.40	7.76	129,992
San Diego	22,818	9.31	7.72	212,531

1,967,001

California State University Capital Planning, Design and Construction ASF PER FTE MODEL USER GUIDE	Subject Restructuring Campus Capacities	Revision	
		Effective June 1998	

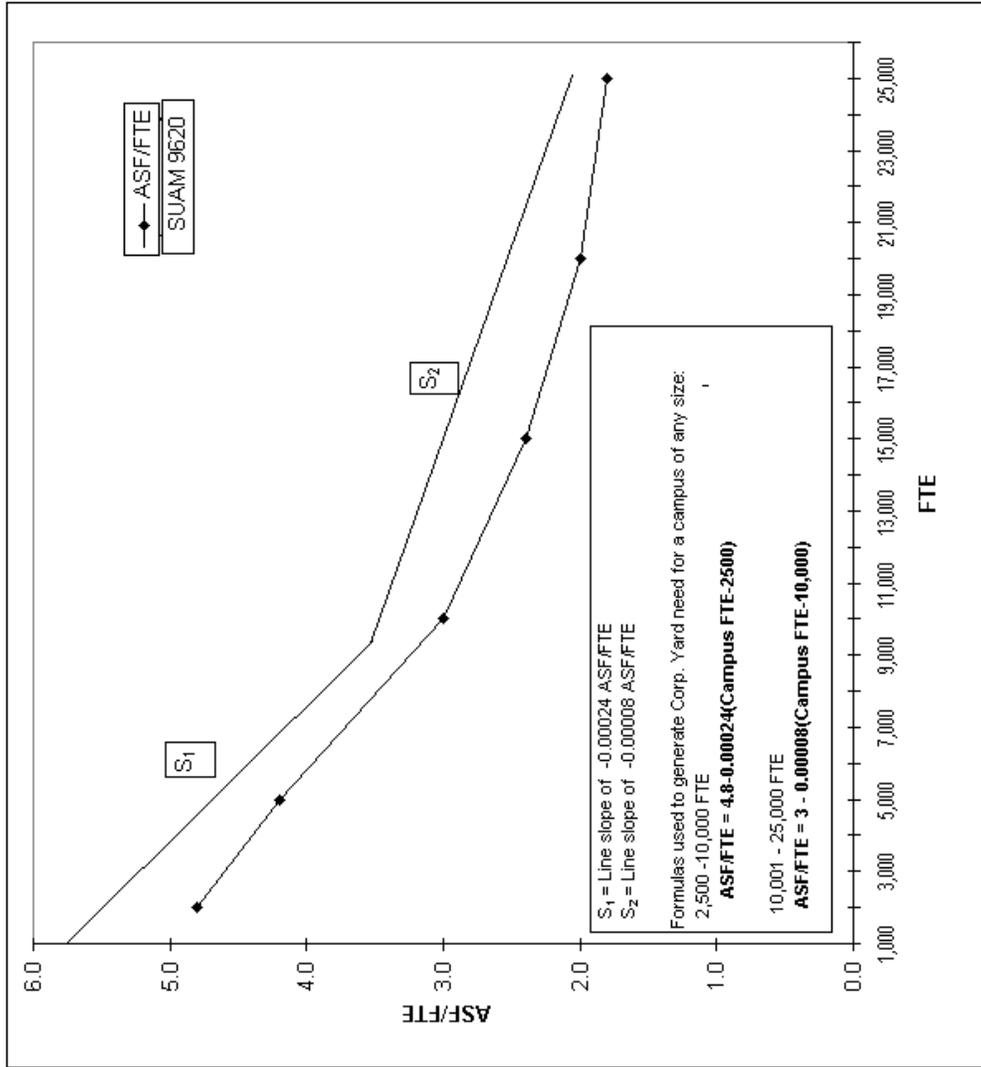
Library Space Standards



FTE in thousands	ASF/FTE Library Standard	ASF/FTE Existing
0.0	15.64	
1.0	15.64	
2.0	15.64	9.60
3.0	15.64	
4.0	15.64	17.25
5.0	15.64	12.91
6.0	15.64	11.48
7.0	15.64	15.14
8.0	15.64	
9.0	14.81	18.46
10.0	14.08	12.97
11.0	14.02	
12.0	13.97	14.25
13.0	13.91	16.05
14.0	13.85	11.96
15.0	13.80	17.25
16.0	13.74	21.33
17.0	13.68	9.76
18.0	13.62	21.33
19.0	13.57	10.25
20.0	13.51	11.52
21.0	13.45	15.10
22.0	13.40	
23.0	13.34	
24.0	13.28	
25.0	13.23	

California State University Capital Planning, Design and Construction ASF PER FTE MODEL USER GUIDE	Subject Restructuring Campus Capacities	Revision	
		Effective June 1998	

Plant Operations/Corporation Yard Space Standards



FTE	ASF/FTE
2,500	4.8
5,000	4.2
10,000	3.0
15,000	2.4
20,000	2.0
25,000	1.8

California State University Capital Planning, Design and Construction ASF PER FTE MODEL USER GUIDE	Subject Restructuring Campus Capacities	Revision	
		Effective June 1998	

Appendix H

Instructional and Instructional Related Space Requirements by Discipline by Campus

The Appendix H is the hard copy of an electronic matrix that translates enrollments by discipline, level and category of instruction into assignable square foot (ASF) needs for any discipline. This translation takes place through the application of the existing State of California Space and Utilization Standards using enrollments from the Course Section Report(CSR) which is extracted from the Academic Planning Database (APDB). The model follows the same format of calculation as the Form PPD 2-3, except the model incorporates a capability to compute the disciplines needs for any FTE number. Provision is also provided in this appendix to display “existing ASF” in the same category of instruction as “need” for the purpose of comparison.

To help the reader to understand how the model works, an example using one discipline for Fresno is set forth in Appendix H of this document. This example illustrates the model formula results along with the discipline ASF existing. On page 2, the model calculates the ASF needs for Agriculture (discipline 01) using the Course Section Report (CSR) enrollments (example on Appendix F).

Aside from the example, Appendix H is made up of the CSU HEGIS Discipline Categories, beginning with discipline 01, Agriculture and ending with discipline 49, Interdiscipline Studies. Also, discipline 00001, the category of “Interdiscipline” was added to pick up the instructional activity ASF and faculty/faculty administrative ASF in this classification. Please note that the Appendix H alphabetical column headings correspond to the alphabetical column headings in Appendix F (cell formulas).

To use the model, for a particular discipline/disciplines, use the following documents:

1. **Most Current Fall Course Section Report (CSR).** To develop the information needed from this document, follow the examples on page 1 of Appendix F.
2. **Space Standards Chart, Appendix D.** The model input from this chart is the discipline multiplier [Weekly Student Contact Hours (WSCH) divided by 100]. The lecture multiplier is constant for all disciplines. The lab multiplier varies from discipline to discipline.

**California State University
Capital Planning, Design and Construction
ASF PER FTE MODEL
USER GUIDE**

**Subject
Restructuring Campus
Capacities**

**Revision
Effective
June 1998**

	A	B	Y	V	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
1	FRESNO															
2		CSRF Fall	1998													
3		Campus Total FTES	14,895													
4		Campus Total Adjusted FTIEF	747													
5		SFR	19.95													
6		SFDB, Spring	1997													
7																
8																
9																
10																
11		HEGIS CATEGORY														
12	01	Agriculture & Natural Resources	2,813	2,032	0		0			4,026	5,186	15,000	33,055	19,055	35	77
13	02	Architecture & Environmental Design														
14	03	Area Studies														
15	04	Biological Sciences														
16	05	Business Admin & Mgmt														
17	06	Communications														
18	07	Computer & Information Sciences														
19	08	Education (excluding PE & ITec)														
20	08	Physical Education (PE)														
21	08	Industrial Technology (ITec)														
22	09	Engineering														
23	10	Fine & Applied Arts														
24	11	Foreign Languages														
25	12	Health Professions														
26	13	Home Economics														
27	15	Letters														
28	16	Library Science														
29	17	Mathematics														
30	18	Military Science														
31	19	Physical Sciences														
32	20	Psychology														
33	21	Public Affairs & Services														
34	22	Social Sciences														
35	49	Interdisciplinary Studies														
36	00001	Interdiscipline														
37		Uninventoried ASF, estimated2														
38		0019 self-instruction computer labs														
39		Total of Categories														
40		CAMPUSWIDE LECTURE														
41																
42																
43																
44																
45																
46																
47																
48																
49																
50																
51																
52																
53																
54																
55																
56																

Lecture Totals
Instructional Totals

General Administration Totals
Library Totals
Media Totals
Plant Operations Totals

CAMPUS PERMANENT ASF TOTALS

00000 Unclassified ASF Total

Temporary ASF Total

CAMPUS PERMANENT AND TEMPORARY ASF TOTALS