

## Education Program Analysis

### Teaching Environment Task Force

An *ad hoc* committee called the Teaching Environment Task Force (TETF) was established in August 2004 consisting of District administrators, faculty, student representatives and Bond Team members. Its purpose was to steer the development of an academic program to be used as a basis for planning Delta College in support of the Measure L bond implementation. The Bond Team had reviewed the 1999 Education Master Plan and recommended that additional analysis was needed to confirm that capital projects discussed in the Bond Master Plan were still appropriate. The TETF committee met regularly over the course of five months and in September 2004 a preliminary report on demographics was presented by the CCS Group to the TETF. In January 2005 a final report relating demographics to curriculum was delivered to the District's Facilities Committee. A series of workshops with District stakeholders was held from March to May 2005 to review program and division growth. A brief summary of findings is presented below. For more detail the reader is referred to CCS Group's report and the appendix of this report.

### Demographic Analysis

Current analysis shows a 40% increase in total District population by year 2020. Currently 93% of the student population resides in San Joaquin County and over half of the student population represents ethnic minorities. Sixty percent of students are under age 24 with the high school graduation rate rising in San Joaquin County.

The District has implemented distance learning and regional education outreach and Internet learning represents a significant portion of enrollment growth. The Bond Master Plan has a new Tracy Center opening by 2007, Manteca Center in 2008, Lodi/Galt in 2009 and a Foothills Center in 2010. Growth potential is estimated highest in Tracy/ Mountain House and Lodi/ Galt.

Employment trends show job opportunities growing with forecasts in education, healthcare, government (including education) and retail ranging in many cases from 15-20% over a seven-year projection. The analysis identified major employers near the District such as Delta itself, other educational and healthcare institutions such as Kaiser Permanente, Blue Shield and General Mills. Projections were provided for a wide range of industries with employment opportunities.

### Existing Education Setting

Program analysis looked at historic growth of student population by the District's ten divisions:

- Applied Science and Technology (AST)
- Business Education (BE)
- Communication Skills (CS)
- Family Consumer and Health Science (FCHS)
- Fine Arts (FA)
- Guidance and Counseling (GC)
- Library Services (LS)
- Physical Education and Recreation and Athletics (PERA)
- Science and Mathematics (SM)
- Social Science (SS)

Curriculum offerings were identified at Stockton and existing outreach centers.

### District Enrollment Projections

College / Center	2000	2005	2010	2015
Stockton	13,794	15,234	16,525	17,674
Tracy	1,139	1,666	4,538	5,579
Lodi/Galt	2,484	2,807	3,475	4,086
Manteca	1,359	1,753	3,215	3,768
Calaveras	316	375	842	1,820
Total	19,092	21,835	28,595	32,927

Source: SJDCCD

### District Historic Weekly Student Contact Hours (WSCH)

Division	1999	2000	2001	2002	2003
AST	20,329	22,330	23,246	24,084	22,536
BE	17,630	16,245	16,476	14,751	13,993
CS	38,911	42,187	38,931	44,710	42,916
FCHS	19,350	18,068	17,420	18,699	20,581
FA	14,503	14,869	17,349	16,747	17,074
GC	2,579	2,832	3,663	3,703	3,927
LS	128	57	105	99	51
PERA	13,360	12,874	12,601	12,417	11,329
SM	32,360	32,145	32,569	33,221	32,117
SS	29,027	29,411	30,541	30,949	31,988

Source: SJDCCD Information Systems Department

WSCH data are for Fall Semesters and exclude Internet or non-credit courses



### Weekly Student Contact Hour (WSCH) Analysis

The State community college codes and regulations use WSCH data as the basis for evaluating existing room utilization and for projecting future need. WSCH data reflect that students may require more than one hour of instruction time to receive one credit hour.

The Chancellor's Office had established a 2% District growth model for Delta excluding Internet-based instruction. Three projections from historic growth were analyzed for this master plan. The first projection was based on 5-year historic data. Projections were also made from 7-year historic data and 7-year removing high and low years. Wide variation between growth projections occurred for AST, Fine Arts, Guidance & Counseling and PERA. Varying growth between Divisions also occurred. Business Education, for example showed growth in internet-based instruction but otherwise no growth. Guidance & Counseling had over 20% annual growth averaged over a 15-year period using 7-year historic projections. Since there wasn't one projection method that fairly represented current growth trends, the Chancellor's Office 2% projection was recommended and adopted as the basis for master planning.

### District Growth Model

In order to plan the Stockton campus, a growth model was developed to estimate the effect of new center development over the 15-year timeframe. New centers would be developed in the 5- and 10-year periods with a significant portion of District growth distributed to them. Tracy / Mountain House Center is expected to open in 2007-08 with over 500 full-time equivalent students (FTES). Growth in the following three years is estimated to be close to 10% per year. Growth eventually will flatten to the District-wide 2% over the 15-year period. Manteca Center, currently a relatively small center, is expected to double in size by 2008-09 with programs such as Agricultural Large Equipment and Diesel Technology relocating from Stockton. Beyond that a 5% growth model was used. Lodi / Galt Center, expected to open in 2009-10 is modeled with a new Viticulture program and Culinary Arts program relocating from Stockton. A 5% growth rate was applied over the 15 years. No forecasts for the Foothills Center were incorporated in the model due to its relatively small impact on Stockton Campus during the plan's timeframe.

### Stockton Campus Growth Model

5-year: District growth occurs primarily at Stockton. The Tracy / Mountain House Center is constructed late in this period but for this analysis it is assumed not to divert growth from Stockton. The Science and Math building is under construction but is not added into inventory this period. Cunningham Center is still in inventory. Existing space is converted to labs to increase inventory or to re-distribute lecture classrooms. New buildings will add labs and shops, warehouse and Maintenance & Operations.

10-year: Stockton campus growth flattens as new centers at Mountain House and Lodi/Galt start up and Manteca expansion occurs. The Science & Math building enters into inventory and Cunningham Center serves as swing space, goes off-line or is demolished. New buildings are constructed to meet continuing laboratory demand or re-distribute space for program moves.

15 year: Stockton growth is flat and classroom and laboratory space is re-distributed to meet program changes versus growth.

## Education Program Analysis

### Stockton Facility Capacity Analysis - Fall 2003 baseline

Analysis of existing facilities was based on room inventory data for Fall 2003 developed by the District but received from the state's on-line database. The inventory was taken prior to the Center for Microscopy and Allied Sciences building being in inventory. Inventory information was also received from District archives in building floor plan diagrams.

The analysis was made for lecture classrooms, laboratories (and shops) and offices. Internet-based student load and PERA laboratory load were excluded from analysis. Capacity analysis is presented as a percent ratio of room capacity to room loads with 100% representing balanced inventory. Values lower than 100% represent inventory shortages and surpluses are represented by higher values. Room loads convert WSCH to assignable square feet (ASF) of floor area using state formula.

#### Classrooms: 86% capacity to load

There are approximately 66,000 ASF of classroom and classroom service in inventory at Stockton with close to 4,000 stations or 17 ASF / Station average (16 ASF / Station without classroom service). The State guideline allows for 15 ASF / station. If room proportions, length to width, are appropriate then station counts should be achievable with either fixed or tab-arm seating. Sled desks require more space per station which may explain why some room station counts aren't achieved at Delta. A more recent estimate showed classrooms at 120% capacity to load which is likely a more accurate reflection of trends. A surplus of existing classrooms will affect how projects at Stockton that include new classrooms will be presented to the state for matching funds.

#### Laboratories: 68% existing capacity to load

There are approximately 151,000 ASF of laboratories and laboratory service, 3,100 stations and an average 48 ASF / station (43 ASF / station without laboratory service). State guidelines vary from 30-200 ASF / station depending on lab program. Recent laboratory capacity to load analysis, assuming conversion of existing other space to labs, is estimated at 96% .

#### Offices: 99% existing capacity to load

Over 50% of all office space at Delta is administrative or for campus support functions such as student services. Administrative offices for the most part are identified in the space inventory and attributed to specific organizations. Faculty offices are not distributed to Divisions and are assumed to be listed under General Assignment. General Assignment offices range in size from 60 to over 300 ASF with most between 70 and 75 ASF. Many offices are not large enough to accommodate student consultation with faculty. Recent analysis showed a 137% capacity to load analysis for offices.

### District Projected Weekly Student Contact Hours (WSCH)

Division	2003 (Actual)	Five Year Projection 2008	Ten Year Projection 2013	Fifteen Year Projection 2018
AST	22,536	24,882	27,471	30,330
BE	13,993	15,449	17,057	18,833
CS	42,978	47,452	52,391	57,844
FCHS	20,581	22,723	25,088	27,699
FA	17,074	18,851	20,813	22,979
GC	3,927	4,336	4,787	5,285
LS	51	56	62	69
PERA	11,329	12,508	13,810	15,247
SM	32,117	35,460	39,150	43,225
SS	31,988	35,317	38,993	43,052
Total	196,574	217,034	239,624	264,564

Source: CCS Group

*The Business Administration program had no WSCH associated for Fall 2003. Fall 2002 was used for projection purposes. Baseline data does not include non-credit WSCH or Internet enrollment. All historic and baseline data was provided by the SJDCC.*

### Conclusions

The district-wide 2% District growth model was applied to the Stockton campus by making assumptions about new centers and estimating growth remaining at Stockton. After 15 years the District has grown by approximately one-third of the Fall 2003 baseline. Although Divisions have varying growth projections ranging from no growth to over 20%, a uniform growth rate is applied to all Divisions for the purposes of the master plan.

### Stockton Campus

The Stockton campus grows at 2% per year until the first new center at Mountain House is established. After that, growth at Stockton is relatively flat and most District growth occurs at other centers. By Year 15, Stockton load is projected to peak at around 8% greater than the 2003 baseline. The CCS Group report, "SJDCC District WSCH – Facility ", dated 1/14/2005, provides District-wide program analysis in detail. Details of the Stockton campus growth model can be found in the appendix.