

## **PROGRAM RECOMMENDED FOR DISCONTINUANCE**

COLLEGE OF SAN MATEO

### **Academic Response to Program Recommended for Discontinuance**

This report responds to the Tier 1 Fall 2012 Report on Program Discontinuance for Horticulture submitted to the Academic Senate Governing Council on June 24, 2011.

#### **Introduction**

The Science and Horticulture faculty oppose the discontinuance of the Horticulture program and respectfully request the Academic Senate Governing Council (ASGC) oppose the discontinuance of the Horticulture Program and recommends that the Board of Trustees takes no action on this matter during summer 2011. We oppose this action based on the following:

- The Horticulture Program has good retention (91% to 92%) and LOAD (556 to 611 before the program went on hiatus and after consolidating as a night program) for most of the years since 2006 compared to other programs. (In spring 2009 when the Administration's Budget Reduction Proposal (the fall 2009 "list") was put together the LOAD was 577.)
- The Horticulture Program has a curriculum that aligns with the proposed Transfer Model Curriculum (TMC) for Agricultural Sciences. All core courses in Horticulture are part of those under consideration for the TMC for agricultural sciences.
- The Horticulture Program curriculum, with approval of professional development funds, has been revised using a distance learning model of hybrid and online courses, a unique delivery mode, and that will increase enrollments. Enrollments in online and hybrid classes in Sciences are very well enrolled and have full wait lists.
- The Horticulture Program (including floristry and horticulture) can be put on hiatus following Spring Semester of 2012, while the opportunities for the TMC are explored, and until the budget situation improves. The TMC for Agricultural Sciences is one of the first models in response to SB 1440 because of the importance of agricultural sciences to the state of California.
- California agriculture, of which horticulture and floriculture is a part, is far larger, measured by sales, than that of any other state. California agriculture produces more value than most countries and is larger than, for example, such major agricultural producers as Canada or Australia. Horticulture prepares students for entry into this large, diverse, complex, and dynamic industry.  
(<http://giannini.ucop.edu/CalAgBook/Chap3.pdf>)

- The facilities used by horticulture are shared with 43% of science courses, in addition to other programs on campus (including art, photography, Middle College, EOPS, music, architecture, and others).
- The driving force for the discontinuance of horticulture and floristry has been the construction of a parking lot, not deficiencies in the program. Elimination of a program to build a parking lot may not comply with some Title 5 regulations.
- The Horticulture program has well established partnerships and collaborations with the University of California Master Gardeners, the San Mateo County Recycleworks Master Composters; and promotes the College at the De Young Museum, Filoli Estate, the San Mateo County Fair, the Plantscape Industry Alliance, and other community and state venues.

## Summary

A detailed report follows below that analyzes the Criteria for Program Evaluation. A summary of our conclusions:

### I. Criteria for Retention:

**Ic.** Horticulture is a broad-based program that provides both transfer, associate degrees, and certificates for its students. Students in the transfer path may choose not to complete a certificate, and take chemistry and biology classes in addition to other general education requirements.

**Id.** Horticulture courses could provide a basis for the SB1440 Transfer Model Curricula for agricultural sciences. C-ID Number Series AG-EH outline a curriculum, which includes core courses in the current curriculum at College of San Mateo, including both horticulture and floristry courses.

### II. Programs to Consider for Selective Retention:

**Ila.** Horticulture courses average retention of close to 90 percent. (PRIE data)

**Ilc.** Horticulture is only taught at the College of San Mateo campus. The campus provides the only college-level training in horticulture in the County of San Mateo. This makes the program unique to the college and the district.

**Ild.** In fall of 2010 and spring of 2011 the horticulture and floristry courses were revised to include a long distance learning model. This would make horticulture education services unique to the Bay Area and California, and enhance delivery of agriculture/horticulture education to working professionals seeking to advance in the field or enter the field. This learning model is unique to horticulture in the state and can serve students inside and outside the District.

**IIf.** The horticulture program and the Building 20 complex should be considered as “gem” for the College of San Mateo Campus. The botanical collection includes over 300 species of plants for teaching trees, shrubs, ornamentals, cut flowers, unique botanical specimens, living fossils, and a variety of growth forms, seed forms, and fruit forms. A collection of this type is not found anywhere in the county.

**Ilg.** The Horticulture Program at CSM helps prepare students for examinations in a number of certificate or licensing programs.

### III. Programs to Eliminate

**IIIa.** The numbers presented in the Discontinuance report have been found to be in error for various reasons. Corrected data has been presented that includes hours by arrangement and has removed load added for ISC duty. FTES and LOAD figures are higher than shown in the Discontinuance Report. For example, if a faculty member is paid to supervise the Integrated Science Center (ISC), those hours are added to the course LOAD. If the class has Hours By Arrangement (HBA), LOAD goes down for the class that has HBA, if those hours are not included in the calculation.

**IIIb.** The program met load targets in 2009, and was trending up with nighttime instruction, prior to budget reductions.

**IIIc.** The conclusion that horticulture has low employment demand reflects one set of data and does not include the wide variety of job titles and business opportunities available to horticulture professionals. The costs of sustainability, we believe, are high estimates. Remodeling Building 20 for dual use by biological sciences and horticulture has the potential to increase service to many students sent away because Building 36 is considerably smaller than the facilities it replaced. With a minimally refurbished lab and lecture rooms in Building 20 we could serve impacted biology courses, and at the same time, lower the cost of building a new horticulture/floristry lab.

### Background

The current proposal to discontinue the Horticulture Program (Horticulture) follows a decision by the college president and the Board of Trustees (Board) in November of 2009. Sometime in early or mid-year, 2009, a parking lot (referred to in this report as the Edison Parking Lot) was planned for the Building 20 Complex (which is the teaching facility for horticulture, sciences, and other programs). Math/Science faculty were not consulted prior to this decision regarding the impact of the project on academic programs and student success. Along with this decision, a decision was made not to provide a facility of equivalent capability and quality at another College of San Mateo location, effectively eliminating the ability to deliver a viable horticulture

program. The process of shared governance or collegial consultation was not followed as required with any campus process that negatively impacts academic programs.

The plans for Edison Parking Lot were never mentioned in any public venue (Board Meetings or Academic Senate) in the months leading up to the original planned construction date of Summer 2010. In fact, the horticulture faculty found out about the project by accident in November of 2009. A month before, Horticulture was originally placed on the administration's Budget Reduction Proposal (the fall 2009 "list") without consideration of Program Improvement Viability (PIV). At the time Horticulture was listed for elimination, the average load was 577.1, and not a candidate for PIV according to established criteria. This was pointed out in Resolution 20 unanimously approved by the Academic Senate on January 26, 2010. Since this time, there have been "after the fact" discussions about the program and proposals for alternate facilities. These proposals have never equaled the quality of instructional facilities that exist now. Negotiations were constrained by budgets that were insufficient to meet program needs. Horticulture was included as a funded facility program in both the 2001 and 2006 Master Plans, developed after Bond Measures C and A. Horticulture is specifically named in both plans. Shared Governance is also mentioned as a fundamental process in the introduction to both plans. In statements to the Board (District Senate President Patty Dilko, May 13, 2009) concerning programs to be eliminated and despite the budget issues facing the college, all programs were supposed to be afforded a consultation process and transparency in decision-making. Horticulture was never consulted or proposed for PIV during all of this time. PIV was never initiated during yearly Program Reviews. A Facilities PIV was requested by President Claire and Chancellor Galatolo on Feb 16, 2011 and the Facilities PIV committee was approved by Academic Senate on Mar 8, 2011. Faculty began researching for the PIV study. President Mike Claire agreed to provide Science/Horticulture faculty with a construction schedule on Feb 22, 2011, but the first schedule he shared was on April 21, 2011. The construction schedule he shared indicated the demolition plans. On April 21, Division staff was notified of the discontinuance of the Horticulture Program and given instructions to ready the facilities for demolition by July 1, 2011.

### **Response to Discontinuance Criteria**

The Discontinuance Report provides an analysis of the discontinuance criteria only. We believe and provide notes below of reasons to consider retaining Horticulture as a program at the College of San Mateo.

**Criteria (Based on "Criteria for Program Reduction, Compression, Elimination, and Consolidation and Coordination," distributed by e-mail to all CSM employees)**

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## **I. Programs To Retain**

**a) Not Applicable**

**b) Not Applicable**

**c)** Retain select programs required for the most frequently pursued associate degrees, certificates, and transfer programs.

Horticulture is a broad-based program that provides both transfer, associate degrees, and certificates for its students.

**d)** Retain select programs to reflect an adequate number of additional SB 1440 Transfer Model Curricula (TMC) across the College. (This must take into consideration the need to be selectively comprehensive and requires using professional judgment to apply multiple measures.)

Horticulture courses could provide a basis for the SB1440 Transfer Model Curricula for agricultural sciences. C-ID Number Series AG-EH outline a curriculum, which includes similar courses in the current curriculum at College of San Mateo, including both horticulture and floristry courses. The first step in the development of a TMC is the development of CI-D courses and course descriptors. See the TMC for Agricultural Sciences course listings at the end of this report. Core courses in the horticulture program are part of the Agriculture TMC.

## **II. Programs to Consider for Selective Retention (Reduction)**

**a)** Consider retaining programs with a strong record of retention, persistence, and goal attainment.

Horticulture courses average retention of close to 90 percent.

**b) Not applicable**

**c)** Consider retaining programs that are unique and have a high demand for employment.

Horticulture is only taught at the College of San Mateo campus. The campus provides the only college-level training in horticulture in the County of San Mateo. This makes the program unique to the college and the district. Horticulture was originally established at the college 60 years ago. The horticulture program has a long history of training horticulture professionals in the county. See comments on employment demand in Criteria III below.

**d) Consider retaining programs that are innovative/cutting edge.**

We would like to point out that in fall of 2010 and spring of 2011 the horticulture and floristry courses were revised to include a long distance learning model. This would make horticulture education services unique to the Bay Area and California, and enhance delivery of horticulture education to working professionals working in the field or seeking to enter the field. This learning model is unique to horticulture in the state and has the potential to serve many students. Both floristry and horticulture courses have been re-written as hybrid courses for after-hours or evening instruction. The courses will feature technical, design and theory normally taught as lecture to be delivered online. The students will come to campus for hands-on labs only.

**e) Not Applicable**

**f) Consider retaining programs that have value to the community at large.**

The horticulture program and the Building 20 complex should be considered as “gem” for the College of San Mateo Campus. The botanical collection includes over 300 species of plants for teaching trees, shrubs, ornamentals, cut flowers, unique botanical specimens, living fossils, and a variety of growth forms, seed forms, and fruit forms. A collection of this type is not found anywhere in the county, including the Filoli Estate and the San Mateo Arboretum. No community college in the region has a production greenhouse the size and capability of CSM’s greenhouses. The Building 20 complex is a unique assemblage of areas designed for teaching the full range of horticulture and floristry skills. The lawns and putting green were established to train landscape professionals on turf management. The gardens with the shrubs, vines and groundcovers allow teaching of plant identification with approximately 75% of the specimens in the complex. The complex produces a variety of perennial cut flower materials. The landscape is also mature, showing fully grown flowering and fruiting specimens.

The program, and the partnerships that have been established, serve the community at large. The department has hosted a number of community education events and partners with green growing/green industry entities in the county. Samples of these programs include:

1. Master Composters. Master Composters is a volunteer training program that educates the public on composting and reducing wastes going to landfill. This organization has trained on our campus for many years. Master Composters is one of the County of San Mateo initiatives in its Recycleworks program and is part of the mandate for AB 939, the California Recycling Law.

2. Master Gardeners: this is a volunteer education extension program, which is part of the University of California Extension Service or UCCE. UCCE is established in California and other states with Land Grant universities to extend agricultural research coming out of the university systems to the public at large.
3. De Young Museum Bouquets to Art: this is an annual event that invites top designers from around the Bay Area to create interpretive floral designs for the art exhibits at the museum. Only accomplished designers are invited to participate in the event. The College's instructors are among this group. Annually, the instructors create an exhibit, calling attention to the college.
4. Filoli Estate: this is an annual event that invites designers from the county to create a floral design show in the mansion in May. The College instructors, and a number of former and current students apply and receive invitations to participate in this event.
5. San Mateo County Fair: the department has been requested in years past to assist the College with its annual activities at the San Mateo County Fair. Floristry has contributed designs and conducted stage shows for many years at the fair. Many of our students compete and win prizes at the fair in growing and floral design.
6. Monthly General Meetings: the floristry student organization, the Student American Institute of Floral Designers Alexander Graham Chapter, sponsors monthly design shows as part of its partnership with the American Institute of Floral Designers (AIFD). AIFD only sponsors accredited 2-year and 4-year colleges. The College is one of only 15 colleges in the nation that merit AIFD Chapters. The shows are open to all students and the public. The College is able to draw top local and out-of-town designers to these shows, which are well-attended.
7. Plantscape Industry Alliance: in the past the College has sponsored educational meetings for this organization which serves the interior plantscape industry. Meetings have been suspended since Hort 325 was put on hiatus. Horticulture faculty continue to maintain a relationship with interior plantscape organizations.
8. Floristry and horticulture have prepared designs and plants for many campus events: The annual multicultural awards event sponsored by EOPS and the California Community College Association, are some examples.
9. The Holiday Sale. The annual Holiday Sale was a popular community event that was held for many years. Horticulture and floristry students grew poinsettias and prepared fresh plants and holiday designs for this event. The event was suspended in 2009 because of construction and the program being put on hiatus. We received many calls from the public regarding the loss of the sale. The sale was reinstated in 2010. This sale was also an important fundraiser for the programs. Proceeds from sales and shows support improvements to facilities.

10. The current greenhouse is also shared with Grounds staff. Grounds staff propagate many of the plants used on campus from cuttings, saving the purchase of nursery stock.

**g) Consider retaining programs that lead to licensure**

The Horticulture Program at CSM helps prepare students for examinations in the following certificate or licensing programs:

- California Department of Pesticide Regulation’s Qualified Applicator
- California Certified Nurseryman Certificate
- California Landscape Contractor’s License
- PLANET Landscape Industry Certified Technicians
- California Certified Florist
- American Institute of Floral Designers Accreditation as Certified Floral Designer or Accredited Designer

**III. Programs to Eliminate**

**a) Consider for discontinuance programs and transfer pathways that serve few students**

We dispute this conclusion. A “small program” needs to be put into context with other programs at the campus that are being retained.

The following data was presented in the “Program Recommended for Discontinuance” for Horticulture distributed by the administration on June 29, 2011.

Term	Fill Rate	HORT FTEF	HORT FTES	% of College Total FTES	HORT WSCH	HORT LOAD	College LOAD
Fall 2006	50.20%	1.48	18.16	0.46%	544	373	500
Fall 2007	60.40%	1.51	20.04	0.50%	601	399	506
Fall 2008	81.00%	1.07	14.48	0.36%	434	405	522
Fall 2009	85.00%	0.58	10.13	0.20%	303	519	579
Fall 2010	71.70%	0.59	4.5	0.10%	135	277	589

The highlighted numbers have been found to be in error for various reasons. In fact, 4 out of the 5 semesters provided show HORT FTEF different than in raw data provided by PRIE. As program review evolves we need an equalizing mechanism to make a fair



comparison to other programs. Productivity data need to reflect the actual revenues being brought into the college by a particular program.

A common error present in the HORT WSCH is that hours-by-arrangement were not included in the data provided by PRIE so estimates of contact hours are artificially low. It may in fact be the case that the hours-by-arrangement listed both in CSM’s College Catalog and the schedule of classes were overlooked and not entered into Banner. Since LOAD and FTES are directly proportional to WSCH, HORT LOAD and HORT FTES were undercounted.

For Fall 2009 and Fall 2010, the PRIE data additionally includes faculty LOAD in the ISC, though the faculty being paid to be in the ISC was serving all of the sciences students (a second FSA of the faculty member).

Below is a revised table with corrected data counting hours-by-arrangement (HBA) (as currently reported to the state). As compared to the table above, these errors can significantly affect the results.<sup>1</sup>

Term	Fill Rate	HORT FTEF	HORT FTES	% of College Total FTES	HORT WSCH	HORT LOAD	College LOAD
Fall 2006	50.20%	1.46	19.53		586	401	500
Fall 2007	60.40%	1.50	21.01		630	420	506
Fall 2008	81.00%	1.00	17.86		536	536	522
Fall 2009	85.00%	0.55	10.13	0.20%	303	556	579
Fall 2010	71.70%	0.35	5.42		162.6	469	589

Horticulture reduced its offerings from 9 sections in Fall 2006 and Fall 2007 to 7 sections in Fall 2008 and its LOAD rose from about 100 points below the college average, to slightly above the college average. HORT LOAD in Fall 2009 was comparable to, though slightly less than, the college average. (Although for the 2009-2010 academic year, HORT LOAD was 611.). HORT LOAD in Fall 2010 was below 500, but with the growth shown the previous 3 years, does not indicate a downward trend.

[Spring and academic year follow.]

<sup>1</sup> For example, Case 1) a course with 35 students and 3 hours of lecture with/without 1 hour of HBA per week would produce WSCH values of:  $35 \times 3 = 105$  compared to  $35 \times 4 = 140$ . A similar course with one faculty member would produce an FTE value of 0.2. Case 2) The same course with another person tied to being paid to supervise the ISC for 2 hours per week would produce an FTE value of 1.4. LOAD would be calculated as follows: 1) LOAD is 525 without HBA and 700 with HBA. 2) LOAD with ISC duty included in error is  $105/3.3 = 30.8$  or  $140/3.3 = 40.1$ .

Term	Fill Rate	HORT FTEF	HORT FTES	% of College Total FTES	HORT WSCH	HORT LOAD	Previous Fall College LOAD
Spring 2007		1.97	29.52		886	449	500
Spring 2008		2.04	25.74		772	379	506
Spring 2009		0.95	18.21		546	577	522
Spring 2010		0.75	16.23		487	652	579
Spring 2011		0.35	5.3		159	458	589

HORT LOAD in Spring of 2009 was in the top half of departments listed by LOAD (PRIE Data, Dated 10/18/2009).

AY	Fill Rate	HORT FTEF	HORT FTES	% of College Total FTES	HORT WSCH	HORT LOAD	Fall College LOAD
2006-7		3.43	49.05		1471	428	500
2007-8		3.54	46.76		1403	396	506
2008-9		1.95	36.07		1082	556	522
2009-10		1.29	26.36		791	611	579
2010-11		0.69	10.72		322	464	589

The number of students in the program per semester per year is as follows:

Year (Fall to Spring)	Enrollments at Census
2006-7 (9 Hort Courses)	296
2007-8 (9 Hort Courses)	346
2008-9 (7 and 5 Hort Courses)	282
2009-10 (3-4 Hort Courses)	181
2010-11 (2 Hort Courses in budget reduction)	96

The revised table above shows and corresponds with a report issued for the ASGC process in 2009 that prepared the budget reduction list issued in October (dated 2009 report 10/18/09). This list showed an FTEF of .9; FTES of 18.2; and a LOAD of 577.1. Horticulture was meeting the load target of 570 at that time. Trends show that as

horticulture moved to nighttime instruction, trends were improving, until budget reductions were put in place. The same report shows 13 programs below Horticulture in FTES; and 33 programs with lower LOAD. The Discontinuance Report concludes that Horticulture is below college averages, rather than target loads. There are likely many programs, particularly CTE programs that cannot match the size of transfer programs.

The Discontinuance Report makes this comment: “The faculty [is] to be commended for making adjustments to the program over the past two years.” However, recent historical data clearly indicate that full Horticulture/Floristry program serves few students relative to college FTES and enrollment and department LOAD is substantially below college averages. If the program is being compared to college averages, rather than load targets by program, then the analysis should compare other programs to provide some perspective. The adjustments in the program that were made starting in 2008 indicate a healthy enrollment in horticulture courses that converted to night instruction.

The Discontinuance Report makes the comment: “Few certificates and degrees have been awarded in these programs over the past several years.” The PRIE data do not reflect the transfer students who may transfer into horticulture programs without earning an AS degree in horticulture. After the budget reductions took place, horticulture and floristry did not have the ability to provide enough units for certificates in horticulture or floristry. In floristry, many of the courses were removed from the schedule. Some students chose to repeat courses offered, but some did not, and chose to wait until the courses were reinstated. Currently, we have 52 students in the program pipeline who desire to get their certificates.

Providing only two courses in a program the FTES is going to go down. Most of the decision-making regarding horticulture has been based on the post-reduction numbers of the program, not a full program that is being held at night. We can project that with mostly online and hybrid courses classes will fill as they do with other online offerings.

Out of 97 students 47 obtain certificates. This is a percentage of 48.5 percent of students. This data should be compared to other programs based on a percentage basis not based on totals for the college.

It should be noted that HORT/FLOR faculty state that many students “job out” before receiving a degree or certificate. Faculty does not recall this point. Note the percentage show above indicate a healthy number of students go on to get certificates. Students don’t necessarily job out, but enter the industry and continue working toward a certificate. The online and hybrid curriculum will make the program more efficient for

obtaining certificates. The number of certificates has not been an issue discussed in program reviews. If it had, we would have set up an initiative to encourage students to earn their certificates.

The Discontinuance Report makes several statements again and again how the program is small and low enrolled. However, the issue was never formally addressed in Program Reviews or addressed under Program Improvement Viability. Enrollment targets were sufficient based on prior communications, and comparative college data until the issue of the Edison Parking Lot was brought up by the Construction Planning Department.

The College, we believe, recognized the fact that the facilities were long overdue for upgrading and this was likely hurting enrollments. This is illustrated under the IPP statement as follows (December 2007):

This Initial Project Proposal will renovate Building 20 (13,126 GSF), which is in poor condition, but because of the concrete construction maintains structural integrity. It is a 40-year building that has not been modernized since it was built. The focus of this project will be to improve the classroom space and support CSM's important Horticulture and Floristry programs, which feed into San Mateo County's critical agricultural industry. Modernizing the adjacent greenhouses and improving the outdoor classroom spaces is integral to this project with the goal of providing modern, controlled plant growth facilities and instructional laboratories. Bringing green technological solutions to an old building will allow the program to use such solutions as part of the educational mission, and use the building as a marketing tool to future students. Another important aspect of this project is to activate a portion of the campus that is isolated and remote. In addition, other vocational programs will need classroom and office space after the demolition of the seismically unsafe buildings that currently house these programs. Included as part of this project are safety and security enhancements, improvements to the indoor air quality with substantive changes to the building's ventilation system. The building has numerous safety problems including required asbestos abatement, insufficient wiring for standard information technology and other electronic systems. The project will upgrade the electrical system, renovate restrooms, as well modernize digital building controls and address ADA accessibility issues.

See discussion under III c. below.

**b) Consider for elimination programs with low LOAD, Fill Rate, WSCH, and/or enrollment (LOAD target is 570 as set by the Budget Planning Committee [BPC] and approved by the Institutional Planning Committee [IPC].)**

As noted above, Horticulture has met its target load the 2 years out of the 6 analyzed after nighttime instruction was established and was trending up, until budget reduction was implemented. Fill rates are high.

**c) Consider for elimination programs with high costs of sustainability and low employer demand and high costs of sustainability**

We would like to see a report of other programs to make a fair comparison with other CTE programs. Horticulture only receives an annual budget of \$4,000 per year that goes mostly to horticulture courses. Floristry traditionally has raised its own funds for facility improvements

and supplies. Note that the special equipment in the lab, including the cooler, special sinks, mats, all were purchased by the students through fundraising. An upgrade of the greenhouse took place in 1993, with funds from student plant sales, the College Horticulture Club purchased a Priva computer to monitor and control the greenhouse environment. In 1998, the nursery industry, community members, and the College Horticulture Club paid for the installation of a modern polycarbonate roof to replace the glass roof. Some of the sponsors included Pacific Gas and Electric Company, Half Moon Bay Nursery, Hank Sciaroni (UCCE), Bay City Flower Company, and Brown Ferris Industries. Since 2001, horticulture was a named program in both the 2001 and 2006 Facilities Master Plans. Horticulture faculty did not embark on any major fundraising for any upgrades, believing that bond money was approved. IF staff had known that bond money was going to be withdrawn, we would have moved to upgrade our facility as before. In fact, anticipating bond funds, but not for some years, horticulture staff wrote two grants in early 2009 for garden bed upgrades, that were not submitted because of being notified of the Edison Parking Lot Project. Further, horticulture staff will raise funds for the horticulture program if necessary.

### **Cost of Greenhouses**

San Jose City College greenhouse is not a fair estimate. This greenhouse is part of a building and therefore has higher costs of construction, and is not designed as a teaching greenhouse. The other estimates are more in line with the type of greenhouse that could replace the existing greenhouse. The storage sheds are probably sound and well-constructed. The lath house needs to be rebuilt but is relatively cost-effective to build needing only lath and re-installation of weed cloth flooring. Informal discussions have taken place with Master Gardeners about rebuilding the lath house.

The Discontinuance Report makes this statement: "The floristry courses require a laboratory room with special equipment." This is not true. The existing lab is a multipurpose lab where floristry specialty equipment was added, mostly purchased by the students. The "specialty equipment" includes a ceiling mounted mirror (that can be reused), a small walk-in cooler (not a walk-in cold room), deep sinks (off-the shelf stainless sinks), and access to the lab (not a loading dock). The operating number for a classroom given to the Volunteer Committee (Task Force) in 2010 was 1 million for a classroom. We believe full consideration of reasonable options has not been fully studied by the College. Included in the estimate should be the cost of a modest remodel of Building 20, not building a new lab (the 2.5 to 3 million dollar estimate quoted in the Discontinuance Report). We would also like to know how these costs compare to other programs that have received bond funds, such as cosmetology, nursing, art, sciences, digital media, and physical education, etc.

Note that the IPP proposed minimal improvements to Building 20: asbestos abatement, wiring upgrade for smart classrooms, renovation of restrooms. The project will upgrade the electrical system, renovate restrooms, as well modernize digital building controls and address ADA accessibility issues. We received one wiring estimate for \$2500; asbestos abatement is only required for the windows according the Asbestos and Lead Survey Report; ADA may require remodeling the bathrooms.

Facilities costs have not been an issue at Program Reviews. We again believe these discussions are after the fact justifications driven by the Edison Parking Lot Project and the fact that the horticulture facility improvements were deferred to the end of the Capital Improvement Program (CIP2).

### **Employer Demand**

We request to see the employer demand data cited in the Discontinuance Report. These data are likely dependent on what job titles are used to base the numbers on. The data researched by science and horticulture faculty indicate horticulture and floristry are diverse fields offering a wide variety of job and business ownership models. Horticulture is classed as a stable field, with a baseline of employment opportunities regardless of the economy (Triton College <http://www.triton.edu>). **PIV would have been the venue to look at aligning horticulture and floristry education to serve the future employment outlook in this field. An examination of different sources indicates that the employment picture varies depending on what you examine as a “job” in this field.**

### **Horticulture/Environmental Horticulture/Agriculture**

The U.S. Department of Labor Statistics show some sectors of the field are shrinking, but some are expanding. Overall agricultural management services, of which horticulture is a part, expects modest growth. Larger growth is expected in technical service areas related to agriculture. Horticulture majors have a wide variety of occupations to choose from. These include: operating a greenhouse, landscaping service, vegetable farm, or orchard, landscape design and maintenance, marketing of horticultural products, applied research in plants, crops and pests, crop inspection, and many other fields. Facilities or land management organizations that hire horticultural professionals include theme parks, athletic fields and golf courses, and nurseries, private farms, botanical gardens. The statistics provided likely do not include business ownership opportunities. Many horticulture students have the opportunity to open private landscape services businesses or design studios. The demand for environmental horticulture is a growing field. The need for environmental restoration erosion prevention will require more experts in environmental horticulture. The increase in developing more

sustainable cropping systems and plant materials is increasing. The desire to grow more food locally is leading to an increase in urban farming services. See tables attached at the end of this report. A survey of horticulture businesses in the county produced over 350 companies.

(Source: U. S. Department of Labor Statistics: <http://stats.bls.gov/oco/ocos176.htm#outlook>)

## **Floristry**

The U.S. Department of Labor does show the employment declining for floral designers, but the job opportunities as good because of turnover in the industry. The floristry program specifically addresses preparing students for the high-end opportunities of the profession. Entry level floral designers have to advance in a larger enterprise or open their own shops. A recent email survey of our own graduates showed over fifty percent was working in the business, many of them with their own floral enterprises.

Research completed by Dr. Dennis H. Tootelian, Director of the Center for Small Business at California State University, Sacramento states that the expenditures by growers, wholesalers, retailers and affiliated businesses create a ripple effect that generates 121,950 full time equivalent jobs in California. This means that there are a large variety of jobs that are related to the floral industry. A survey of floral businesses in the county produced over 180 companies (note some may overlap with horticulture).

## **The Green Industry**

It would be unfortunate if the College eliminated its opportunity to participate in the Green Industry going forward. Any consideration of the permanent elimination of horticulture education in the county should be evaluated in the context of the growth and potential of the green industry. The industry has been challenged by the recession, as many programs have been. The IPP for Building 20 had the beginning of a 21<sup>st</sup> Century Vision when it stated: “. Bringing green technological solutions to an old building will allow the program to use such solutions as part of the educational mission, and use the building as a marketing tool to future students.” Green jobs could include horticulture but extend into other green technologies. For example, some green building concepts are starting to feature plants in, outside, or on rooftops, as part of their designs. Several innovative companies that operate in the Bay Area are deploying vertical gardens and farms concepts. The science and horticulture staff believes the Building 20 complex can grow over time as a potential site for a variety of education missions for our students. Informal discussions have taken place with other College programs about the possibilities of interdisciplinary collaboration and fundraising for green industry demonstrations.

A report, published in 2007 and updated in 2010 called the Economic Contributions of the Green Industry in the United States. This report cites 257,885 green jobs in California with an economic impact of 16 million dollars (2010 data). (Source: <http://www.fred.ifas.ufl.edu/economic-impact-analysis/pdf/US-green-industry-in-2007.pdf>).

### **Savings**

The report states horticulture faculty is to be commended for efforts to make adjustments to the program. Faculty has done this recently and in the past. The floristry program was revamped over a period of 2000-2001 to re-write the program FROM 3 unit courses to 1.5 unit courses in response to modular learning at the time and to allow for all night-time teaching of the floristry curriculum. The organization of the units and number of courses was only addressed in 2010 and was not an issue in previous program reviews. When this issue was brought to our attention, we immediately responded. The current floristry program consists of 12 units total, 4 3-unit courses with the breadth requirements integrated into other CSM programs including art, biology, and business.

### **Cost Avoidance**

We believe as stated above the estimated costs for sustaining a horticulture or green industry facility is too high. The Building 20 Complex was carried in all plans as a “funded” program. The 3.5-4 million estimate is equivalent to the IPP proposal submitted in 2007 for Capital Outlay Funds. The college has found \$3 M in bond funds to build a parking lot. We believe that some of these funds could be employed in educational facilities, rather than parking. We can assume that the original “funded” amount in the IPP report of \$1 M should be used for science and horticulture.

The current floristry students in the pipeline total 52 students, including returning students who need to complete units. Floristry staff is working with the administration to complete floristry instruction and students in the pipeline by Spring of 2012.

### **Other Considerations**

Construction of the new College Center’s needs for parking have not been fully analyzed or justified. The “need” as described requires removal of an academic facility without going through the full consultation process in a proper sequence for elimination of an academic program, as required by Title V. Building 20 is strategically suited to serve as additional classrooms for sciences. Building 36 does not have the capacity to serve all of the students who



want to take classes (4 fewer lecture rooms, 2 fewer biology labs, and 3 fewer chemistry labs). With modest improvements Building 20 could address impacted programs.

Below are the proposed courses, with their descriptors (C-ID or course identification number system), for the Transfer Model Curriculum (TMC) for Agricultural Sciences. Core Horticulture courses are part of those most likely to be included in the TMC and are highlighted.



<b>C-ID #</b>	<b>Agricultural Business Course Name</b>
<a href="#"><u>AG-AB 104</u></a>	Introduction to Agricultural Business
<a href="#"><u>AG- AB 108L</u></a>	Agricultural Computer Applications
<a href="#"><u>AG- AB 112L</u></a>	Agricultural Sales and Communication
<a href="#"><u>AG- AB 116L</u></a>	Agricultural Marketing
<a href="#"><u>AG- AB 120L</u></a>	Farm Management
<a href="#"><u>AG- AB 124L</u></a>	Agriculture Economics
<a href="#"><u>AG- AB 128L</u></a>	Agricultural Accounting
<b>C-ID #</b>	<b>Animal Science Course Name</b>
<a href="#"><u>AG-AS 104/106L</u></a>	Introduction to Animal Science
<a href="#"><u>AG-AS 108L</u></a>	Beef Cattle Science
<a href="#"><u>AG-AS 112L</u></a>	Dairy Cattle Science
<a href="#"><u>AG-AS 116L</u></a>	Equine Science
<a href="#"><u>AG-AS 120L</u></a>	Poultry Science
<a href="#"><u>AG-AS 124L</u></a>	Sheep Science
<a href="#"><u>AG-AS 128L</u></a>	Swine Science
<a href="#"><u>AG-AS 132L</u></a>	Livestock Feeds and Nutrition
<a href="#"><u>AG-AS 136L</u></a>	Animal Health and Sanitation
<a href="#"><u>AG-AS 140L</u></a>	Milk Production and Technology
<a href="#"><u>AG-AS 144L</u></a>	Dairy Cattle Selection and Evaluation
<a href="#"><u>AG-AS 148L</u></a>	Livestock Selection and Evaluation
<a href="#"><u>AG-AS 152L</u></a>	Introduction to Meat Science
<a href="#"><u>AG-AS 156L</u></a>	Animal Breeding and Reproduction
<b>C-ID #</b>	<b>Environmental Horticulture Course Name</b>

<a href="#">AG-EH 104L</a>	Introduction to Environmental Horticulture
<a href="#">AG-EH 108L</a>	Plant Materials and Usage I
<a href="#">AG-EH 112L</a>	Plant Materials and Usage II
<a href="#">AG-EH 116L</a>	Plant Propagation and Production
<a href="#">AG-EH 120L</a>	Pest Management in Environmental Horticulture
<a href="#">AG-EH 124L</a>	Floriculture Crop Production
<a href="#">AG-EH 128L</a>	Landscape Maintenance
<a href="#">AG-EH 132L</a>	Landscape Construction and Installation
<a href="#">AG-EH 136L</a>	Landscape Design
<a href="#">AG-EH 140L</a>	Turfgrass Management
<a href="#">AG-EH 144L</a>	Landscape Irrigation
<a href="#">AG-EH 148L</a>	Beginning Floral Design
<a href="#">AG-EH 152L</a>	Advanced Floral Design
<a href="#">AG-EH 156L</a>	Horticulture Business Management
<a href="#">AG-EH 160L</a>	Landscape Business Management

<b>C-ID #</b>	<b>Mechanized Agriculture Course Name</b>
<a href="#">AG-MA 104L</a>	Introduction to Mechanized Agriculture
<a href="#">AG-MA 108L</a>	Tractor Operation
<a href="#">AG-MA 112L</a>	Farm Machinery
<a href="#">AG-MA 116L</a>	Agricultural Welding
<a href="#">AG-MA 120L</a>	Small Engines
<a href="#">AG-MA 124L</a>	Agricultural Safety
<a href="#">AG-MA 128L</a>	Equipment Fabrication
<a href="#">AG-MA 132L</a>	Advanced Agricultural Welding
<a href="#">AG-MA 136L</a>	Farm Structures
<a href="#">AG-MA 140L</a>	Diesel Engines
<a href="#">AG-MA 144L</a>	Power Equipment Electrical Systems

<a href="#">AG-MA 148L</a>	Hydraulics
<a href="#">AG-MA 152L</a>	Power Trains
<a href="#">AG-MA 156L</a>	Power Equipment Air Conditioning
<a href="#">AG-MA 160L</a>	Surveying
<a href="#">AG-MA 164L</a>	Small Power Equipment
<b>C-ID #</b>	<b>Forestry/Natural Resources Course Name</b>
<a href="#">AG-FNR 104L</a>	Introduction to Forestry Science
<a href="#">AG-FNR 108L</a>	Environmental Science
<a href="#">AG-FNR 112L</a>	Dendrology/Native Plant Identification
<a href="#">AG-FNR 116L</a>	Principles of Wildlife Management
<a href="#">AG-FNR 120L</a>	Outdoor Recreation
<a href="#">AG-FNR 124L</a>	Silviculture
<a href="#">AG-FNR 128L</a>	Wildland Fire Technology
<a href="#">AG-FNR 132L</a>	Forest Measurement
<a href="#">AG-FNR 136L</a>	Introduction to Forest Surveying
<a href="#">AG-FNR 140L</a>	Watershed Ecology and Restoration
<a href="#">AG-FNR 144L</a>	Forest Hydrology and Watershed Management
<a href="#">AG-FNR 148L</a>	Forest Ecology
<a href="#">AG-FNR 152L</a>	Forest Remote Sensing and Geographic Information Systems
<a href="#">AG-FNR 156L</a>	Forest Protection

<b>C-ID #</b>	<b>Plant Science Course Name</b>
<a href="#">AG-PS 104/106L</a>	Introduction to Plant Science
<a href="#">AG-PS 108L</a>	Agronomy/Field Crops
<a href="#">AG-PS 112L</a>	Vegetable Crops
<a href="#">AG-PS 116L</a>	Forage Crops
<a href="#">AG-PS 120L</a>	Orchard Production and Management
<a href="#">AG-PS 124L</a>	Vineyard Production and Management
<a href="#">AG-PS 128L</a>	<b>Soil Science</b>
<a href="#">AG-PS 132L</a>	Weeds and Poisonous Plants
<a href="#">AG-PS 136L</a>	Fertilizers and Soil Amendments
<a href="#">AG-PS 140L</a>	Irrigation
<a href="#">AG-PS 144L</a>	Economic Entomology
<a href="#">AG-PS 148L</a>	<b>Plant Diseases</b>
<a href="#">AG-PS 152L</a>	Introduction to Fruit Science
<a href="#">AG-PS 156L</a>	Plant Protection/IPM
<a href="#">AG-PS 160</a>	Introduction to Viticulture
<a href="#">AG-PS 164</a>	Topics in Agricultural Pest Control License Updating
<a href="#">AG-PS 168</a>	Plant Science: Problems
<b>C-ID #</b>	<b>Viticulture Course Name</b>
<a href="#">AG-VIT 100</a>	Introduction to Viticulture
<a href="#">AG-VIT 104L</a>	Viticultural Practices Fall
<a href="#">AG-VIT 108L</a>	Viticultural Practices Spring
<a href="#">AG-VIT 112</a>	World Viticulture
<a href="#">AG-VIT 116</a>	Vineyard Management
<a href="#">AG-VIT 120L</a>	Vineyard Pest and Disease Management
<a href="#">AG-VIT 124L</a>	Vineyard Soils, Fertilizers and Irrigation
<a href="#">AG-VIT 128</a>	Grapevine Canopy Management and Trellising

<a href="#">AG-VIT 132L</a>	Grapevine Pruning
<a href="#">AG-VIT 136</a>	Vineyard Propagation

<b>C-ID #</b>	<b>Wine Education and Enology Course Name</b>
<a href="#">AG-WE 104</a>	World Viticulture and Wine Styles
<a href="#">AG-WE 108</a>	Wine Regions of California
<a href="#">AG-WE 112</a>	Wines of the Local Region (Sonoma Example)
<a href="#">AG-WE 116</a>	Wine and Food Pairing
<a href="#">AG-WE 120</a>	Fundamentals of Enology
<a href="#">AG-WE 124L</a>	Fall Winery Operations
<a href="#">AG-WE 128L</a>	Spring Winery Operations
<a href="#">AG-WE 132L</a>	Summer Winery Operations
<a href="#">AG-WE 136L</a>	Advanced Winemaking
<a href="#">AG-WE 140L</a>	Winery Management
<a href="#">AG-WE 144</a>	Sensory Analysis of Wines
<a href="#">AG-WE 148L</a>	Laboratory Analysis of Wines
<a href="#">AG-WE 152L</a>	Fundamentals of Chemistry and Microbiology
<a href="#">AG-WE 156</a>	Wine Marketing and Sales
<a href="#">AG-WE 160</a>	Wine Sales and Distribution
<a href="#">AG-WE 164</a>	Retail Wine Sales
<a href="#">AG-WE 168</a>	Wine Tasting Room Staff Development
<b>C-ID #</b>	<b>Equine Science Course Name</b>
<a href="#">AG-AS 116L</a>	Equine Science
<a href="#">AG-EQ 104L</a>	Equine Reproduction
<a href="#">AG-EQ 108</a>	Equine Business Management
<a href="#">AG-EQ 112</a>	Equine Nutrition
<a href="#">AG-EQ 116</a>	Equine Health
<a href="#">AG-EQ 120L</a>	Basic Equine Handling
<a href="#">AG-EQ 124</a>	Farrier Science
<a href="#">AG-EQ 128L</a>	Western Riding & Horsemanship

<a href="#">AG-EQ 132L</a>	English Riding & Horsemanship
<a href="#">AG-EQ 136L</a>	Equine Fitting & Showing
<a href="#">AG-EQ 140</a>	Introduction to Therapeutic Riding Principles
<a href="#">AG-EQ 144</a>	Equine Facilities
<a href="#">AG-EQ 148</a>	Introduction to Equine Acupressure & Massage
<a href="#">AG-EQ 152L</a>	Introduction to Horse Training
<a href="#">AG-EQ 156</a>	Equine First Aid



<b>C-ID #</b>	<b>Sustainable Agriculture Course Name</b>
<a href="#"><u>AG-SA 104</u></a>	Introduction to Sustainable Agriculture
<a href="#"><u>AG-SA 108L</u></a>	Exploring Sustainability in Agriculture
<a href="#"><u>AG-SA 112</u></a>	An Introduction to Sustainable Food Systems
<a href="#"><u>AG-SA 116</u></a>	Basic Integrated Pest Management Concepts
<a href="#"><u>AG-SA 120L</u></a>	Agricultural Composting
<b>C-ID #</b>	<b>Veterinary Technician</b>
<a href="#"><u>AG-VET 104</u></a>	Introduction to Veterinary Technology
<a href="#"><u>AG-VET 108</u></a>	Veterinary Anatomy and Physiology
<a href="#"><u>AG-VET 112</u></a>	Veterinary Animal Nursing
<a href="#"><u>AG-VET 116</u></a>	Small Animal Health and Disease
<a href="#"><u>AG-VET 120</u></a>	Veterinary Laboratory and Pharmacy Procedures
<a href="#"><u>AG-VET 124</u></a>	Veterinary Equipment, Operation, Instrumentation & Safety
<a href="#"><u>AG-VET 128</u></a>	Veterinary Dental and Surgical Assistance
<a href="#"><u>AG-VET 132</u></a>	Veterinary Medical Office Procedures