NSTRUCTION PROGRAM REVIEW: SPRING 2013 SUBMISSION CYCLE

Program Name: Drafting Technology
Academic Year: 2011-2012
Faculty Contact: Lilya Vorobey
Program Review Submission Date: March 25, 2013

I. Description of Program

Provide a brief description of the program and how it supports the college's College Mission and Diversity Statements, Institutional Priorities, 2008-2013, 5 in 5 College Strategies, Spring 2011, and other institutional planning documents as appropriate.

Drafting is common to all manufacturing and construction activities. The drafter interprets the engineer's, architect's, interior designer and industrial designer's ideas, presenting them in the language of manufacturing and construction.
Currently the program offers an AS degree, a Certificate of Achievement and Certificates of Specialization all of which are currently being revised upon recommendations from the Drafting Advisory Council.

II. Summary of Student and Program Data

A. Student Learning Outcomes Assessment

Summarize recent SLO assessments, identify trends, and discuss areas in need of improvement.

We currently have three classes being offered (Draf 110, 111 & 121). In these courses, SLOs are assessed via quizzes. Specific items such as a student's ability to use ANSI standards in dimensioning and orthographic projections have been analyzed. We have found that students who have not had a technical (hands on) drafting course do not do well in visualizing and accomplishing dimensioning standards. Thus, a one unit sketching and visual thinking course has been submitted to COI and will be taught as a 690 course in Fall 2012.

B. Student Success Indicators

1. Review Student Success and Core Program Indicators and discuss any differences in student success indicators across demographic variables. Also refer to the College Index and other relevant sections of the Educational Master Plan: Update, 2012, e.g., Student Outcomes and Student Outcomes: Transfer. Basic Skills programs should also refer to ARCC data.

   Drafting Technology courses are cyclical in their relation to community job offerings. In addition, students often take a course, reap the minimum information they need to get a job and then drop the course. Since our lab has barely been able to support the latest software programs, we have had difficulty in filling second semester classes.

   Last, we are only offering one section of each beginning course which then creates a low enrollment in the second semester courses. Since we are down to one computer lab, offering more classes is a scheduling issue since we have to borrow a lab in order to do so.

2. Discuss any differences in student success indicators across modes of delivery (on-campus versus distance education). Refer to Delivery Mode Course Comparison.

Currently all of the drafting classes are lecture / lab. On line courses would be difficult to offer beginning courses require a considerable amount of guidance in mouse usage. For example, one command will require a student to use both the left mouse button, right mouse button as well as the center wheel. This is something that would be rather difficult in a virtual situation.

C. *Program Efficiency Indicators. Do we deliver programs efficiently given our resources?*

Summarize trends in program efficiency as indicated in the Student Success and Core Program Indicators (LOAD, Full-time and Part-Time FTEF, etc.).

Drafting Technology courses are cyclical in their relation to community job offerings. In addition, students often take a course, reap the minimum information they need to get a job and then drop the course or simply find a job and drop the class. Our retention rate is above the institution's rate although our success rate is lower.

The drafting program has been reduced to one computer lab. Thus we are unable to run advanced courses without borrowing a CIS lab. Scheduling then becomes problematic since the bulk of the student population comes from the work force and prefers to take classes in the evenings.

There has been loss of students due to the state of the computer lab. Students do discuss the pros and cons of a program among themselves as well as with the instructors. We have had many complaints from students about losing their working drawings since the computers freeze (they are barely able to support the software programs).

D. *Course Outline Updates*

Review the course outline update record**.** List the courses that will be updated in the next academic year. For each course that will be updated, provide a faculty contact and the planned submission month. See the Committee on Instruction website for course submission instructions. Contact your division's COI representatives if you have questions about submission deadlines. Career and Technical Education courses must be updated every two years.

Courses to be updated	Faculty contact	Submission month
All courses have been updated.	Lilya Vorobey	December 2012
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E. *Website Review*

Review the program's website(s) annually and update as needed.

Faculty contact(s)	Date of next review/update
Lilya Vorobey	December 2014
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F. *Additional Career Technical Education Data – CTE programs only. (This information is required by California Ed. Code 78016.)*

1. Review the program's Gainful Employment Disclosure Data, External Community, and other institutional research or labor market data as applicable. Explain how the program meets a documented labor market demand without unnecessary duplication of other training programs in the area. Summarize student outcomes in terms of degrees, certificates, and employment. Identify areas of accomplishment and areas of concern.

Employment of drafters is expected to grow 6 percent from 2010 to 2020 (U.S. Occupational Handbook), slower than the average for all occupations since engineers, industrial designers and architects are now learning the software programs thus "drafting" is no longer a stand-alone occupation. Developments in software programs used by "drafters" and other professionals they work with, are changing the nature of drafters' work and how this work will have to be done. Thus, it is imperative that we marketing touch specific industries such as electronics, architecture, interior design, industrial design and engineering.

2. Review and update the program's Advisory Committee information. Provide the date of most recent advisory committee meeting.

The Drafting Advisory Council met on October 31, 2012 Members present were:

Robert Scheren, AIA Architect, Dean & Professor Emeritus
Jason Hill, Fly SFO, CAD Manager
Jeff Payne, SFO Airport, CAD Manager, Adjunct Faculty
Jason Silva, Student Representative
Lilya Vorobey, Faculty
Dean Kathy Ross

III. Student Learning Outcomes Scheduling and Alignment

A. *Course SLO Assessment*

Explain any recent or projected modifications to the course SLO assessment process or schedule.

We have assessed through quizzes and exams that we are in need of a sketching and visual thinking course (will be offered in the latter half of Fall 2013). The SLOs that assessed skills required to master multi-view projections have been improved.

B. Program SLO Assessment

Explain any recent or projected modifications to the program SLO assessment process or schedule.

We have rewritten the program SLOs and will be including them in current documentation and courses. They are as follows:

1. Demonstrate an understanding of industrial design and drawing methods and techniques.
2. Prepare technical drawings using computer-aided drafting (CAD) and design software.
3. Analyze information to develop solutions to technical aspects of a design problem.

C. SLO Alignment

Discuss how Course SLOs support Program SLOs. Discuss how Course and/or Program SLOs support Institutional/GE SLOs. Refer to TracDat related Program and Institutional SLO reports.

The Drafting Technology courses and program accommodates:

- Workforce preparation
- Occupational preparation for certification based-training
- Re-entry students
- Dislocated workers
- Seniors leaving retirement
- Underemployed

IV. Additional Factors

Discuss additional factors as applicable that impact the program, including changes in student populations, state-wide initiatives, transfer requirements, advisory committee recommendations, legal mandates, workforce development and employment opportunities, community needs. See Institutional Research as needed.

The Advisory Committee has recommended that we offer REVIT - a CAD program that is recommended preparation (in addition to AutoCAD) for architectural related employment. This course will be offered in Fall 2013.

The major issue drafting program faces is the lack of a second computer lab (that we once had) and funding for new computers as well as new software updates. This situation has put the program in jeopardy since without these needs, the goals of providing students with up to date variety of courses that include a second semester of a track is impossible.

V. Institutional Planning

A. Results of Plans and Actions

Describe results, including measurable outcomes, from plans and actions in recent program reviews.

A SolidWorks II class has been added to the curriculum. The major setback is that we are only offering one section of each beginning course which then creates a low enrollment in the second semester courses. Since we are down to one incompetent computer lab, offering more classes is problematic as well as a scheduling issue since we have to borrow a lab in order to run additional second semester track courses.

B. *Program Vision*

What is the program's vision for sustaining and improving student learning and success during the *next six years*? Make connections to the College Mission and Diversity Statements, Institutional Priorities, 2008-2013, and other institutional planning documents as appropriate. Address trends in the SLO assessment results and student success indicators and data noted in Section II. Summary of Student and Program Data.

[*Note*: CTE programs must address changes in the context of completion and employment rates, anticipated labor demand, and any overlap with similar programs in the area as noted in Sections II.F.1 and II.F.2.]

[*Note*: Specific plans to be implemented in the *next year* should be entered in Section V.C.]

If we obtain a new computer lab we will market the program with CSM's marketing department to veterans, handicapped persons, as well as industrial designers, architects, interior designers as well as engineers. As the department grows, we will be able to add advanced courses or summer courses in order to maintain interest in the program.

1. To guide future faculty and staff development initiatives, describe the professional enrichment activities that would be most effective in carrying out the program's vision to improve student learning and success.

   There are a number of seminars available for CAD/Drafting instructors that provide the latest developments in the field. These seminars are attended yearly by both the fulltime as well as the adjunct instructors.

2. To guide future collaboration across student services, learning support centers, and instructional programs, describe the interactions that would help the program to improve student success.

   Availability of open computer labs that are able to support the software programs would benefit students who are unable to afford copies of the programs or computers that are able to support the size requirements of the CAD programs.

3. To guide the Institutional Planning Committee (IPC) in long-range planning, discuss any major changes in resource needs anticipated in the *next six years*. Examples: faculty retirements, equipment obsolescence, space allocation. Leave sections blank if no major changes are anticipated. Specific resource requests for the next academic year should be itemized in Section VI.A below.

   Faculty: Adjunct faculty will be required to teach new software programs as the program grows.

   Equipment and Technology: Computer station requirements will have to be updated as the CAD software programs improve. A new projector is needed in the 19-110 lab. We are using a projector that belongs to the Technology Office, It is over ten years old.

Instructional Materials: 4T

Classified Staff: 4T

Facilities: New carpeting, window coverings, paint on ceiling for the 19-110 lab to replace the paint peeling from the ceiling, the carpeting that is at least fifteen years old, and the drapes are falling apart. There are also dead termites (large ones) in all of the florescent light fixtures.

C. Plans and Actions to Improve Student Success

Prioritize the plans to be carried out next year to sustain and improve student success. Briefly describe each plan and how it supports the Institutional Priorities, 2008-2013. For each plan, list actions and measurable outcomes.

Plan 1

Title:

Revise the Drafting Certificate of Completion to complement the new course offerings as well as the banked courses.

Action(s)	Completion Date	Measurable Outcome(s)
Sending a new Certificate of Completion to COI	Spring 2012	A new certificate will attract students into completing a series of courses. The certificate will be used as a marker for prospective employers.

Plan 2

Title:

Revise the A.A. and A.S. Degrees to reflect the new course offerings.

Description

A revision of the A.A. and A.S. degrees is required to update the catalog listing, new courses as wells as banked courses.

Action(s)	Completion Date	Measurable Outcome(s)
Revise degree offerings and submit to state.	Fall 2013	Enrollment improvement

Plan 3

Title:

Market the program in order to be able to grow the program.

Description
Market the program courses to high schools, employers and the community.

Action(s)	Completion Date	Measurable Outcome(s)
Visit High Schools to market program	Fall 2013	Enrollment improvement
Create a brochure for marketing	Summer 2013	Higher Enrollment

For additional plans, cut/paste from above and insert here. Or add an additional page. Number your additional plans accordingly.

[Note: Itemize in Section VI.A. Any additional resources required to implement plans.]

VI. Resource Requests

A. Itemized Resource Requests

List the resources needed for ongoing program operation and to implement the plans listed above.

Faculty

Full-time faculty requests (identify specialty if applicable)	Number of positions
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Complete Full-Time Faculty Position Request Form for each position.

Description of reassigned or hourly time for prioritized plans	Plan #(s)	Cost

Equipment and Technology

Description (for ongoing program operation)	Cost
Software update: Autodesk software	XXX
Software update: SolidWorks	XXX
30 Computer station that can support the latest Autodesk and Solidworks software	$42,000

Description (for prioritized plans)	Plan	Cost

	#(s)	

Instructional Materials

Description (for ongoing program operation)	Cost

Description (for prioritized plans)	Plan #(s)	Cost

Classified Staff

Description (for ongoing program operation)	Cost

Description (for prioritized plans)	Plan #(s)	Cost

Facilities

For immediate or routine facilities requests, submit a CSM Facility Project Request Form.

Description (for prioritized plans)	Plan #(s)	Cost
New carpeting 19-110 lab		XXX
New window coverings 19-110 lab		XXX
New paint 19-110 lab		XXX

B. Cost for Prioritized Plans

Use the resources costs from Section VI.A. above to provide the total cost for each plan.

Plan #	Plan Title	Total Cost
1		
2		
3		
	For additional plans, add rows and number accordingly.	