DRAFTING and DESIGN TECHNOLOGY
Instructional Program Review 2005-2011

Spring 2012

Prepared by

Name	Title	Name	Title
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Susanna Au	Adjunct Faculty	Lois Bottari	Administrative Secretary
		Marti DeYoung	CTE Supervisor

Drafting and Design Technology Program Review Committee Members

Name	Title	Name	Title
Richard J. Fernandes	Full-Time Faculty	Jim Lancaster	Dean; Career, Technical Education
Susanna Au	Adjunct Faculty	Lois Bottari	Administrative Secretary
Jeremy Clark	Academic Senate Representative	Michelle Plug	Articulation Officer
Irene Malmgren	Vice President of Instruction	Lucinda Over	Dean of Counseling
Linda Welz	Chief Information Services Officer	Lanette Granger	Library and Information Services

PROGRAM REVIEW – Drafting and Design Technology

The final summary of the program review process for Drafting and Design Technology is attached to this page.

I affirm that this program has been reviewed according to the accepted District procedures for program review and that the final summary accurately reflects the consensus of the members of the review committee.

Jim Lancaster, Dean of Career, Technical and Continuing Education	date
Michelle Plug, Articulation Officer	date
David Kary, Chair of Curriculum Committee	date
Irene Malmgren, Vice President of Academic Affairs	date
James Woolum, Academic Senate President	date
Geraldine M. Perri, Superintendent/President	date

It will be the department's responsibility to communicate review recommendations with additional offices and services.

Table of Contents

1. Executive Summary

A. Program History / Description

Drafting and Design Technology is a career technical and transfer program. Recent consolidation of courses into the primary disciplines of Architecture, Engineering Drawing, and Computer Generated Imagery improve visibility of individual and integrated disciplines, facilitate efficient scheduling, and have increased the number of students completing their education goal. Courses in Drafting and Design Technology are offered during the day and evening.

Students completing courses in the Drafting and Design Technology Program acquire understanding, knowledge, skills and abilities in the disciplines of Architecture, Engineering Drawing, and Computer Generated Imagery. Drafting and Design Technology offers foundational curriculum in support of multiple student outcomes. Theory, advanced technology and hands-on experiences prepare students for entry-level employment or advancement in occupations that require graphic communications, engineering drawings, computer-aided design, and illustrations.

B. Strengths / Effective Practices

Drafting and Design Technology is a recognized transfer program to the California State University, University of California and private university systems through articulation and via portfolio review. Faculty use a project-based instructional strategy and advanced technology to engage students in their learning. A "studio" environment that includes students from multiple disciplines (specializations) optimizes "teachable moments" because solutions are holistically related to design and drafting professions. The Advisory Council consists of more than 60 members, including educational representatives from local high schools, California State Polytechnic University Pomona, and the California State Universities of Fullerton and Los Angeles, business representatives from architectural, industrial design, environmental design and engineering firms as well as representatives from Walt Disney Imagineering. The program has made continuous improvements in nontraditional participation and employment and continues to progress towards the statewide goal of 25%.

C. Weaknesses / Lessons Learned

The Drafting and Design Technology program has one full-time professor. The program has grown enough to support an additional full time professor for Computer Aided Design (CAD) and Computer Generated Imagery (CGI) and the existing adjunct professors.

There is need for a six year replacement plan to ensure software and hardware is maintained at or above industry standards.

While we only have one full-time faculty in Drafting and Design Technology, the number of completers of certificates and/or degrees has been equal to colleges with larger programs. Program growth has been slowed by current budget restraints; however, Drafting and Design (Core Indicator 0952) produced Core Outcomes similar to other colleges in the area.

D. Recommendations / Next Steps

Request and monitor transfer data from Office of Institutional Research.

Request one additional faculty with minimum qualifications for Computer Aided Design (CAD), Computer Generated Imagery (DRAF 101, 160, 161, 190, 290) and Architecture; increase adjunct pool for Design Visualization (DRAF 102 and ARCH 102).

Expand access to hardware/software – open lab on alternating hours so students can access and have time in the lab to collaborate and complete projects in the school setting.

Increase utilization of technology in Drafting and Design Technology Program courses by expanding access to hardware/software.

The Advisory Committee has recommended the creation of a multipurpose studio space to accommodate larger numbers of students designing, collaborating, and presenting projects to all students (and guests) throughout the semester. Room plans have been created to meet student class size.

Evaluate and revise specific class content in order to better prepare students for employment or transfer.

Collaborate with Counseling and the Career/Transfer Center to develop an understanding of the Drafting and Design Technology Program.

2. Faculty

Full-Time Faculty	**Adjunct Faculty**
Dr. Richard J. Fernandes AIA	Susanna Au Associate AIA Flint Tabata Kimberly Bowen AIA Jane Yu Eric Rodriguez

3. Program description and mission

The Drafting and Design Technology Program has adopted the Institutional General Education Competencies of Citrus College. The General Education Competencies (as set forth in the Academic Senate minutes dated August 25th 2004).

Any student transferring or completing a degree or certificate from Citrus College must demonstrate effectively assessed awareness, understanding, knowledge, skills, and abilities in the selected competencies.

Transfer Program: The Drafting and Design Technology Program is designed to meet the needs of those who intend to transfer to a college or university within two years. These students should consult with the particular institution they plan to attend to further evaluate this option. Transfer is via portfolio review.

Career Technical Education: The Drafting and Design Technology Program is designed to meet the needs of individuals who want to upgrade current skills or develop new skills needed for employment. The Drafting and Design Technology Certificate meeds these needs.

Core Indicators: The program exceeds all Core Indicator targets with the exception of nontraditional participation and completion. (Please see Attachment C):

Indicator	Negotiated:	2009-10 (Actual)	2010-11 (Actual)
1. Technical Skill Attainment:	88.81%	100.00	90.00
2. Credential, Certificate, or Degree:	82.05%	85.71	85.00
3. Persistence or Transfer:	85.96%	89.19	87.50
4. Placement	81.72%	75.00	81.82
5. Nontraditional Participation	20.37%	18.92	17.50
6. Nontraditional Completion	25.99%	18.75	19.05

4. Program Goals and Objectives

The goals and objectives of the Drafting and Design Technology Program are:

a) Provide transfer credit to colleges and universities.
b) Meet the student learning outcomes and core competencies institutionalized by Citrus College.
c) Provide basic knowledge and skills for students in two years.
d) Prepare students to enter the job market.
e) Provide courses required for students to complete the certificates and/or Associate of Science degree.
f) Provide classes for enrichment and upgrading of skills for students currently employed.
g) Provide classes to support other curricular areas on campus; ARCH 250 and ARCH 251 are IGETC classes. Two to three additional classes will submitted for IGETC certification within the Drafting and Design Technology Program.

5. Review of previous recommendations

MISSION:

a) Integrate current technology into the current Drafting and Design Technology Program curriculum.
-- Response: COMPLETED

b) List the Drafting and Design Technology Program Certificates in the College Catalog and update periodically to keep current.
-- Response: COMPLETED

c) List appropriate cross referencing of Architectural Drafting under Architecture in the College Catalog and class schedule.
-- Response: COMPLETED

d) Utilize marketing and recruitment techniques to attract students in our district and to ensure that the District's diversity continues to be represented in the Drafting and DesignTechnology Program. (See Core Indicators, Females represent only 25% of enrollment).
-- Response: COMPLETED Core indicators show a gain.

e) Review and enhance the Drafting and DesignTechnology major for the Associate of Science degree (AS).
-- Response: COMPLETED by the recent consolidation of courses into the primary disciplines of Architecture, Engineering Drawing, and Computer Generated Imagery.

f) As is feasible, the various disciplines within the current Drafting and Design Technology - Architecture Program should continue to integrate the State of California Architectural Board's Intern Development Program (IDP) currently being implemented in 2005.
-- Response: COMPLETED

g) Revise Drafting and DesignTechnology - Architecture classes to facilitate expansion of the program and meet the demands of the workplace and the Intern Development Program (IDP).
-- Response: COMPLETED by the recent consolidation of courses into the primary disciplines of Architecture, Engineering Drawing, and Computer Generated Imagery.

h) Initiate contact with the local business community and the Advisory Committee to provide input that will enhance the Drafting and DesignTechnology Program.
-- Response: COMPLETED

NEED:

a) Seek expansion of articulation agreements with four and five-year institutions regarding portfolio review. The major Universities to focus on are Cal Poly Pomona, Cal State LA, SciARC, Cal State Fullerton, and UCLA.
-- Response: COMPLETED

b) Evaluate and revise specific class content in order to better prepare students for employment or transfer.
-- Response: COMPLETED by the recent consolidation of courses into the primary disciplines of Architecture, Engineering Drawing, and Computer Generated Imagery.

c) Work with the Advisory Committee to establish an Annual Drafting and Design Technology Program contest at Citrus for high school students.
-- Response: COMPLETED with ASEA (American Society of Engineers and Architects).

d) Work with Counseling and the Transfer Center to facilitate an enhanced understanding of the Drafting and DesignTechnology Program.
-- Response: INCOMPLETE A matrix is being developed.

e) Articulate with local high schools.
-- Response: COMPLETED on an annual basis

f) Review offerings during the day and evening as student demand increases.
-- Response: COMPLETED

g) Increase utilization of technology in Drafting and Design Technology Program courses. Both software and hardware must be maintained at or above industry standards
-- Response: PARTIALLY COMPLETE due to budget constraints. Need a six year replacement plan to ensure software and hardware is maintained at or above industry standards. Perkins funds have been used to support program funding.

h) Initiate contact with the local business community and the Advisory Committee to provide input that will enhance the Drafting and Design Technology Program.
-- Response: COMPLETED on an annual basis.

QUALITY:

a) Maintain and expand the use of the Advisory Committee in setting the direction of the Drafting and Design Technology Program.
-- Response: COMPLETED

b) Continue to work with Advisory Committee to establish a wider range of internships and job opportunities.
-- Response: COMPLETED

c) Portfolio review is used as a part of student articulation for transfer to Universities. It is understood that portfolio review encompasses the extent of skills acquired by a student in the Drafting Technology Program. Therefore, it is important for the Drafting and Design Technology Program to work with the Citrus College Transfer Center to be sensitive to this process as it relates to students who seek to transfer to either public or private universities.
-- Response: COMPLETED - Perkins CTE counselor incorporates portfolio items into individual student educational plans.

d) Develop, revise, and integrate Student Learning Outcomes into each Drafting and Design Technology Program course outline and syllabus according to the schedule stated in this document.
-- Response: COMPLETED - All courses have SLOs.

e) The Drafting and Design Technology Program is growing. The District should continue to support the needs of the students and quality of the faculty by hiring adjunct instructors as needed. (See Core Indicators, Student weekly contact hours have increased in recent years: 01-02 1300 hrs. to 05-06 1735 hrs.).
-- Response: COMPLETED - additional adjunct instructors have been hired; however, there is a need for an additional full time professor for CAD and CGI.

f) Drafting and Design Technology Program class descriptions should be reviewed and modified as needed
-- Response: COMPLETED - course outlines have been updated in CurricUNET and approved by Curriculum Committee.

g) Revise Drafting and Design Technology - Architecture Program classes to facilitate expansion of the program and meet the demands of the workplace and the Intern Development Program (IDP).
-- Response: COMPLETED.

FEASIBILITY:

a) The Drafting and Design Technology Program facilities are insufficient at the present time. Present rooms seat 25 seats. The average Class size is 22.4 students; however, the average day class size is 35 students. (Please see Core Indicators) Room plans have been created to meet student class size. These plans should be considered for implementation.
-- Response: INCOMPLETE due to budget constraints.

b) Additional promotion of the Drafting and Design Technology Program via Drafting Technology student ambassadors. Ambassadors should have the necessary communication skills
-- Response: INCOMPLETE.

c) Provide access to the Citrus College web site for online student portfolio presentation
-- Response: INCOMPLETE.

d) Expand the Drafting and Design Technology Program through an online community of learners.
-- Response: COMPLETED through the use of the Atlantis website.

COMPLIANCE:
a) Continue to review Drafting and Design Technology Program syllabi, course outlines, and course prerequisites, and the long-range plan in respect to State and District requirements.
-- Response: COMPLETED by the recent consolidation of courses into the primary disciplines of Architecture, Engineering Drawing, and Computer Generated Imagery.

6. List and Review of Degrees, Certificates, and Awards

A project-based strategy has been an effective component of the curriculum and works particularly well within the disciplines grouped under the Drafting and Design Technology Program. The recent consolidation of certificates of achievement to create three clear pathways and the recognition of four and five year university partners is anticipated to increase the number of completers and transfer. This strategy provides an opportunity to implement the SLO assessment component commencing in Fall 2011.

Degree or Certificate Title	Date last reviewed by Curriculum	Average number of awards each year	Date degree SLOs written	Date degree SLOs Assessed	Date last reviewed by Advisory Council
Architectural Drafting - CAD Certificate of Achievement	Discontinued when course content was realigned.	Discontinued when course content was realigned.	Discontinued when course content was realigned.	Discontinued when course content was realigned.	Spring 2010
Drafting Technology - CAD Certificate of Achievement	Discontinued when course content was realigned.	Discontinued when course content was realigned.	Discontinued when course content was realigned.	Discontinued when course content was realigned.	Spring 2010
Architectural Design Certificate of Achievement	Discontinued when course content was realigned.	Discontinued when course content was realigned.	Discontinued when course content was realigned.	Discontinued when course content was realigned.	Spring 2010
Drafting and Design Technology A.S. Degree	Spring 2011	NEW	Spring 2011	NEW	Spring 2012
Computer Aided Design (CAD)-Architecture and Drafting Certificate of Achievement	Spring 2011	NEW	Spring 2011	NEW	Spring 2012
Computer Generated Imagery (CGI) Certificate of Achievement	Spring 2011	NEW	Spring 2011	NEW	Spring 2012
Architectural Design Certificate of Achievement	Spring 2011	NEW	Spring 2011	NEW	Spring 2012

Drafting and Design Technology A.S. Degree

Required Drafting and Design Technology core courses:

Strongly Recommended: DRAF 101 or one year of High School Drafting or one year of Drafting in Industry

ARCH/DRAF102 Visual Communication 2.5
DRAF160 Intermediate Computer Aided Design (CAD) 2.5
DRAF161 Advanced Computer Aided Design (CAD) 2.5
ARCH100 Introduction to Architecture 3
DRAF290 Introduction to Maya Practices. 3

Please complete an emphasis in addition to the core courses:

ARCHITECTURE EMPHASIS

Complete all of the following Architectural courses:

ARCH110 Introduction to Architectural Communication and Functional Design 3
ARCH111 Basic Architectural Design 3
ARCH200 Portfolio Preparation 3
ARCH201 Architectural Design I 3
ARCH202 Architectural Design II 3
ARCH250 History of Architecture: Prehistory to Mannerism. 3
ARCH251 History of Architecture: Baroque to the Present Day 3

ENGINEERING DRAWING EMPHASIS

Complete all of the following Engineering Drawing courses:

DRAF103 Advanced Engineering Drawing 3
PHYS110 Introduction to College Physics 4

COMPUTER GENERATED IMAGERY (CGI) EMPHASIS

Complete all of the following Computer Generated Imagery (CGI) courses:

DRAF291 Learning Maya Transitions 3
ARCH200 Portfolio Preparation 3
ART111 Beginning Drawing 3
ART115 Figure Drawing I 3
ART120 Two-Dimensional Design 3
ART121 Three-Dimensional Design 3

Total Units 20.5 - 34.5

Computer Aided Design (CAD) – Architecture and Drafting Certificate of Achievement

This Computer Aided Design (CAD)-Architecture and Drafting Certificate provides a foundation for such majors as Architecture, Drafting and Computer Generated Imagery.

Strongly Recommended
DRAF 101: Beginning Computer Aided Design (CAD)
or One year of high school drafting.
or Industry drafting experience.

Required Courses:

Course	Title	Units
ARCH 100	Introduction to Architecture	3
ARCH 110	Introduction to Architectural Communication and Functional Design	3
ARCH 111	Basic Architectural Design	3
DRAF 160	Intermediate Computer Aided Design (CAD)	2.5
DRAF 161	Advanced Computer Aided Design (CAD)	2.5
ARCH 102 **or** DRAF 102	Visual Communication Visual Communication	2.5 2.5
ARCH 200 **or** DRAF 103	Portfolio Preparation Advanced Engineering Drawing	3 3

Total Units: 19.5

Computer Generated Imagery (CGI) Certificate of Achievement

This program provides coursework for majors such as architecture, computer generated imagery (CGI), engineering and animation. Design principles, CAD and animation systems are applied to problems in animation, architecture, landscape architecture, urban planning and engineering. Proper and efficient methods of sketching, story boarding, 3D digital models, animations and multifaceted presentations' are examined.

REQUIRED COURSES

Course	Title	Units
DRAF 160	Intermediate Computer Aided Design (CAD)	2.5
DRAF 161	Advanced Computer Aided Design (CAD)	2.5
DRAF 290	Introduction to Maya Practices.	3
ARCH 200	Portfolio Preparation	3
ART 111	Beginning Drawing	3
ART 120	Two-Dimensional Design	3
ART 115	Figure Drawing I	3
ARCH 102 **or** DRAF 102	Visual Communication Visual Communication	2.5 2.5

Total Units: **22.5**

Architectural Design Certificate of Achievement

Design principles, complex animation and CAD systems are applied to problems in architecture, landscape architecture and urban planning. Proper and efficient methods of sketching, producing documents, models, 3D digital models, animations and multifaceted presentations are examined.

Employment opportunities: Entry level - CADPERSON / DESIGN PERSON

Computer Aided Design (CAD)-Architecture and Drafting - Certificate of Achievement required to be completed first.		19.5 units
REQUIRED COURSES:		
Course	**Title**	**Units**
ARCH 201	Architectural Design I	3
ARCH 202	Architectural Design II	3
ARCH 250	History of Architecture: Prehistory to Mannerism.	3
ARCH 251	History of Architecture: Baroque to the Present Day	3
DRAF 290	Introduction to Maya Practices.	3
ART 120	Two-Dimensional Design	3
ART 121	Three-Dimensional Design	3

Total Units: 40.5

7. List of Industry-Based Standard Certificates and Licenses

Program prepares students for:
Autodesk Level I CAD Certificate - 2D. (note: requires two years of experience)
Autodesk Level II CAD Certificate - 3D.
Maya Certificate .

8. Advisory Committee or Council

Name	Position / Company
Jim Lancaster	Dean of Career, Technical Education
Dr. Richard J. Fernandes AIA	Professor / Art Architecture and Planning
Susanna Au Associate AIA	Art Architecture and Planning / Professor
Ms. Elisabete Erlandson AIA	Principal Concept Architect Walt Disney Imagineering
Mr. Dex Tanksley	Senior Facility Designer Walt Disney Imagineering
Adrian Erb	Long Beach Community College
Mr. Richard Graham	Azusa High School
Flint Tabata	Professor
Carlos Hernandes	Project Manager,
Dr. Kim Holland	Director of Vocational Education
Dr. William Husung	Retired Professor
Jane Yu	Professor
Mr. Michael Moore	East San Gabriel Valley ROP
Mr. Frank Paton	Paton Group
Mr. Sidney Pedraza AIA	Architect
Mr. Dale Bartley	Industrial Designer
Dr. Virgil Seaman	Cal State University LA
Mr. William M. Raymond, Jr.	Marshall Engineering Group
Eric Rodriguez	Project Manager, Aday Architects
Mr. Aaron Ruiz	East San Gabriel Valley ROP
Dr. William Husung	Retired Professor
David Teubner	Professor Cal State Long Beach
Wheeler & Wheeler	Architects
Giron Engineers	Engineers
Studio 3 Architects	Architects
Architecture One	Architects
Gilbert Engineering Co.	Engineers

9. Program Student Learning Outcomes

A project-based strategy has been an effective component of the curriculum and works particularly well within the disciplines grouped under the Drafting and Design Technology Program. The recent consolidation of certificates of achievement to create three clear pathways, and the recognition of four and five year university partners, is anticipated to increase the number of completers and transfer. This strategy provides an opportunity to implement the SLO assessment component commencing in Fall 2011.

The Drafting and Design Technology Program has adopted the Institutional General Education Competencies of Citrus College (as approved by Steering December 8, 2008). General education competencies serve as a common set of core curricular components identified and defined by faculty. Student learning outcomes are behaviors based on these competencies.

Any student transferring, completing a degree or certificate from Citrus College, must demonstrate effectively assessed awareness, understanding, knowledge, skills, and abilities in the selected competencies. Students completing courses in the Drafting and Design Technology Program will have acquired the following competencies:

1) Communication (personal expression and information acquisition)
Describe effective drafting techniques including graphic communication, orientation, and decision making.

2) Computation
Demonstrate the ability to estimate time, material, labor and equipment for design and working drawings.

3) Creative, Critical, and Analytical Thinking, and Information Competency
Demonstrate planning techniques and administration of document control for design and working drawings.

4) Community/Global Consciousness and Responsibility
Students think logically and coherently about technical issues and gain an appreciation for the global social and political impact of technical endeavors. By working together in the lab and/or on projects, students develop interpersonal skills and respect for others.

5) Technology
Demonstrate the ability to use technology to prepare hand drawings, Computer Aided Drawings (CAD), and multimedia presentations.

6) Discipline / (Subject Area Specific Content Material)

10. Curriculum Review and Student Learning Outcomes Assessment

Dr. Richard Fernandes was granted a sabbatical leave in Spring 2010 for the purpose of restructuring the Drafing Technology program. During his project, Dr. Fernandes reviewed close to fifty courses that duplicated common curriculum but were offered to students under a variety of course identifiers (i.e. same content in ARCH, DRAF, and ENGR courses). Courses were revised to combine common content under the ARCH and DRAF areas. Revisions were coordinated with colleges and universities to ensure transfer requirements were met.

(see Attachment A - Program of Study: displays the significant changes in this area.)

The following tables reflect the current curriculum.

Curriculum/ SLO Assessment Map:
Drafting

CC 1: Communication	**CC 4: Community/global consciousness and responsibility**
CC 2: Computation	**CC 5: Technology**
CC 3: Creative, Critical, and analytical thinking, information competency	**CC 6: Discipline/Subject Area Specific Content Material**

	CC1 Describe drafting techniques	**CC2** Describe ability to estimate time, material, labor and equipment for design and working drawings.	**CC3** Demonstrate planning techniques	**CC4** Gain appreciation for global social and political impact	**CC5** Ability to use technology to prepare drawings	**Date of SLO Assessment= F11, S12 or CA=(Ongoing, Continuing Assessment)**
DRAF101–Beginning Computer Aided Design (3 Units), Applicability-T/D/C Last Offered-S 12, Last Curriculum Date:S11 , Curriculum Revision Date: S 2017 Course Applicability Key: T=Transfer, D= Degree, C= Certificate, S= Skill Award						
SLO 1	I, D		I, D			F11
SLO 2					I, D	
SLO 3	I, D		I, D		I, D	
SLO Key: I= Introduced, D=Developed, M=Mastered						
DRAF102–Visual Communication (2.5 Units), Applicability-T/D/C Last Offered-S 12, Last Curriculum Date:S11 , Curriculum Revision Date: S 2017 Course Applicability Key: T=Transfer, D= Degree, C= Certificate, S= Skill Award						
SLO 1			I, D, M			
SLO 2			I, D, M			
SLO 3	I, D, M		I, D, M			F11
SLO Key: I= Introduced, D=Developed, M=Mastered						
DRAF 103–Advanced Engineering Drawing (3 Units), Applicability-T/D/C Last Offered-, Last Curriculum Date: S11 , Curriculum Revision Date: S 2017 Course Applicability Key: T=Transfer, D= Degree, C= Certificate, S= Skill Award						
SLO 1					D, M	When offered
SLO 2					D, M	When offered
SLO 3			D, M		D, M	When offered
SLO Key: I= Introduced, D=Developed, M=Mastered						

	CC1 Describe drafting techniques	CC2 Describe ability to estimate time, material, labor and equipment for design and working drawings.	CC3 Demonstrate planning techniques	CC4 Gain appreciation for global social and political impact	CC5 Ability to use technology to prepare drawings	Date of SLO Assessment= F11, S12 or CA=(Ongoing, Continuing Assessment)
DRAF 160–Intermediate Computer Aided Design (2.5 Units), Applicability-T/D/C Last Offered- F11, Last Curriculum Date: S11, Curriculum Revision Date: S 2017 Course Applicability Key: T=Transfer, D= Degree, C= Certificate, S= Skill Award						
SLO 1					I, D	F11
SLO 2					I, D	
SLO 3	I, D		I, D		I, D	
SLO 4	I, D				I, D	
SLO Key: I= Introduced, D=Developed, M=Mastered						
DRAF 161–Advanced Computer Aided Design (2.5 Units), Applicability-T/D/C Last Offered-F11, Last Curriculum Date: S11, Curriculum Revision Date: S 2017 Course Applicability Key: T=Transfer, D= Degree, C= Certificate, S= Skill Award						
SLO 1	M		M		M	
SLO 2			M		M	S12
SLO 3	M		M		M	
SLO Key: I= Introduced, D=Developed, M=Mastered						
DRAF 198–Special Problems (1 Unit), Applicability-T/D Last Offered-, Last Curriculum Date: F10 Curriculum Revision Date: F 2016 Course Applicability Key: T=Transfer, D= Degree, C= Certificate, S= Skill Award						
SLO 1	M	M	M		M	When offered
SLO 2	M	M	M		M	When offered
SLO 3	M	M	M		M	When offered
SLO Key: I= Introduced, D=Developed, M=Mastered						
DRAF 290–Maya Practices (3 Units), Applicability-T/D/C Last Offered-F11, Last Curriculum Date: S11 Curriculum Revision Date: S 2017 Course Applicability Key: T=Transfer, D= Degree, C= Certificate, S= Skill Award						
SLO 1	M		M		M	
SLO 2	M		M		M	F11
SLO 3	M		M		M	
SLO Key: I= Introduced, D=Developed, M=Mastered						
DRAF 291–Maya Transitions (3 Units), Applicability-T/D/C Last Offered-, Last Curriculum Date: S11 Curriculum Revision Date: S 2017 Course Applicability Key: T=Transfer, D= Degree, C= Certificate, S= Skill Award						
SLO 1	M		M		M	When offered
SLO 2	M		M		M	When offered
SLO 3	M		M		M	When offered
SLO Key: I= Introduced, D=Developed, M=Mastered						

	CC1 Describe drafting techniques	CC2 Describe ability to estimate time, material, labor and equipment for design and working drawings.	CC3 Demonstrate planning techniques	CC4 Gain appreciation for global social and political impact	CC5 Ability to use technology to prepare drawings	Date of SLO Assessment= F11, S12 or CA=(Ongoing, Continuing Assessment)
DRAF 698 C–Cooperative Education (3 Units), Applicability-T/D/C Last Offered-, Last Curriculum Date: S11 Curriculum Revision Date: S 2017 Course Applicability Key: T=Transfer, D= Degree, C= Certificate, S= Skill Award						
SLO 1			D			When offered
SLO Key: I= Introduced, D=Developed, M=Mastered						

DRAF 699 A–Cooperative Education (1 Unit), Applicability-T/D/C Last Offered-, Last Curriculum Date: S11 Curriculum Revision Date: S 2017 Course Applicability Key: T=Transfer, D= Degree, C= Certificate, S= Skill Award						
SLO 1			D			When offered
SLO Key: I= Introduced, D=Developed, M=Mastered						

Curriculum/ SLO Assessment Map:
Architecture

CC 1: Communication	**CC 4: Community/global consciousness and responsibility**
CC 2: Computation	**CC 5: Technology**
CC 3: Creative, Critical, and analytical thinking, information competency	**CC 6: Discipline/Subject Area Specific Content Material**

	CC1 Describe drafting techniques	**CC2** Describe ability to estimate time, material, labor and equipment for design and working drawings.	**CC3** Demonstrate planning techniques	**CC4** Gain appreciation for global social and political impact	**CC5** Ability to use technology to prepare drawings	**Date of SLO Assessment= F11, S12 or CA=(Ongoing, Continuing Assessment)**
ARCH100–Introduction to Architecture (3 Units), Applicability-T/D/C Last Offered-S12, Last Curriculum Date:S11 , Curriculum Revision Date: S 2017 Course Applicability Key: T=Transfer, D= Degree, C= Certificate, S= Skill Award						
SLO 1	I, D		I, D	I, D		
SLO 2			I, D	I, D		F11
SLO 3	I, D			I, D		
SLO 4	I, D					
SLO Key: I= Introduced, D=Developed, M=Mastered						
ARCH102–Visual Communication (3 Units), Applicability-T/D/C Last Offered-S12, Last Curriculum Date:S11 , Curriculum Revision Date: S 2017 Course Applicability Key: T=Transfer, D= Degree, C= Certificate, S= Skill Award						
SLO 1			I, D, M			
SLO 2			I, D, M			
SLO 3	I, D, M		I, D, M			F11
SLO Key: I= Introduced, D=Developed, M=Mastered						
ARCH 110–Introduction to Architectural Communication and Functional Design (3 Units), Applicability-T/D/C Last Offered-S 2, Last Curriculum Date:S11 , Curriculum Revision Date: S 2017 Course Applicability Key: T=Transfer, D= Degree, C= Certificate, S= Skill Award						
SLO 1	I, D		I, D			
SLO 2	I, D	I		I, D		
SLO 3	I, D					F11
SLO 4	I, D		I, D			
SLO Key: I= Introduced, D=Developed, M=Mastered						

	CC1 Describe drafting techniques	CC2 Describe ability to estimate time, material, labor and equipment for design and working drawings.	CC3 Demonstrate planning techniques	CC4 Gain appreciation for global social and political impact	CC5 Ability to use technology to prepare drawings	Date of SLO Assessment= F11, S12 or CA=(Ongoing, Continuing Assessment)
ARCH 111–Basic Architectural Design (3 Units), Applicability-T/D/C Last Offered-S12, Last Curriculum Date:S11 , Curriculum Revision Date: S 2017 Course Applicability Key: T=Transfer, D= Degree, C= Certificate, S= Skill Award						
SLO 1			D, M			
SLO 2	D, M	D	D, M		D	S12
SLO 3					D	
SLO 4				D, M		
SLO Key: I= Introduced, D=Developed, M=Mastered						

ARCH 200–Portfolio Preparation (3 Units), Applicability-T/D/C Last Offered-F11, Last Curriculum Date:S11 , Curriculum Revision Date: S 2017 Course Applicability Key: T=Transfer, D= Degree, C= Certificate, S= Skill Award						
SLO 1	D, M		D, M			
SLO 2	D, M	D	D, M			F11
SLO 3	D, M		D, M			
SLO 4					D, M	S12
SLO Key: I= Introduced, D=Developed, M=Mastered						

ARCH 201–Architecture Design 1 (3 Units), Applicability-T/D/C Last Offered-F11, Last Curriculum Date:S11 , Curriculum Revision Date: S 2017 Course Applicability Key: T=Transfer, D= Degree, C= Certificate, S= Skill Award						
SLO 1	D, M		D, M		D, M	
SLO 2	D, M	M	D, M		D, M	F11
SLO 3				D, M		
SLO Key: I= Introduced, D=Developed, M=Mastered						

ARCH 202–Architecture Design 2 (3 Units), Applicability-T/D/C Last Offered-S12, Last Curriculum Date:S11 , Curriculum Revision Date: S 2017 Course Applicability Key: T=Transfer, D= Degree, C= Certificate, S= Skill Award						
SLO 1	D, M		D, M			
SLO 2	D, M	M	D, M			S12
SLO 3	D, M			D, M		
SLO Key: I= Introduced, D=Developed, M=Mastered						

ARCH 250–History of Architecture: Prehistory to Mannerism (3 Units), Applicability-T/D/C Last Offered-F11, Last Curriculum Date:S11 , Curriculum Revision Date: S 2017 Course Applicability Key: T=Transfer, D= Degree, C= Certificate, S= Skill Award						
SLO 1				M		F11
SLO 2	D, M			M		
SLO 3			M	M		
SLO Key: I= Introduced, D=Developed, M=Mastered						

	CC1 Describe drafting techniques	CC2 Describe ability to estimate time, material, labor and equipment for design and working drawings.	CC3 Demonstrate planning techniques	CC4 Gain appreciation for global social and political impact	CC5 Ability to use technology to prepare drawings	Date of SLO Assessment= F11, S12 or CA=(Ongoing, Continuing Assessment)

ARCH 251–History of Architecture: Baroque to the Present Day (3 Units), Applicability-T/D/C Last Offered-S12, Last Curriculum Date:S11 , Curriculum Revision Date: S 2017Course Applicability Key: T=Transfer, D= Degree, C= Certificate, S= Skill Award						
SLO 1				M		S12
SLO 2	M		M	M		
SLO 3	M		M	M		
SLO Key: I= Introduced, D=Developed, M=Mastered						

11. Evaluation Criteria – Need

CAD, CGI, and Environmental Engineering (Architecture) employers in Los Angeles, Orange, San Bernadino, Riverside and Ventura Counties report moderate difficulty in finding qualified applicants. Further they indicated both a requirement and preference for prospective employees who have technical vocational training in the CAD, 3D, and 3D animation software. In the Los Angeles-Long Beach-Glendale Metro Div., the mean hourly rate was $47.56 in 2011. (Source: www.labormarketinfo.edd.ca.gov). There are only 1,500 licensed Architects in Southern California (American Society of Engineers and Architects, 2011).

The Citrus College Drafting and Design Technology Advisory Committee members hire students from our program and provide support for the Drafting and Design Technology Program.

Drafting and Design Technology has been a career technical and transfer program for over fifty years. Although Certificates of Achievement provide multiple exit points that are important to the workforce and working students, Drafting and Design Technology is a comprehensive interdisciplinary program offering lower-division, Associate Degree and transfer options. There are similar programs in the Los Angeles/Orange County Regional Consortium; however, they focus on different areas and methods of Drafting and Design Technology.

COMMENDATIONS:
1. The Drafting and Design Technology Program has been totally revised for the Fall semester of 2011. It meets the demands of the workplace through Advisory Council recommendations.

2. The Drafting and Design Technology Program is articulated with CSU, UC, and private universities.

3. The Drafting and Design Technology Program has articulated with five local high schools.

4.Students are currently able to complete the Drafting and Design Technology AS Degree in two years.

RECOMMENDATIONS:
1. Expand articulation agreements with four and five-year institutions regarding ARCH 100, ARCH 102 AND DRAF 102. The major Universities to focus on are Cal Poly, Cal State LA, SciARC, Cal State Fullerton, Berkeley, and UCLA.

2. Request one additional faculty with minimum qualifications for Computer Aided Design (CAD), Computer Generated Imagery (DRAF 101, 160, 161, 190, 290) and Architecture; increase adjunct pool for Design Visualization (DRAF 102 and ARCH 102).

3. Expand access to hardware/software – open lab on alternating hours so students can access and have time in the lab to collaborate and complete projects in the school setting. Create a multipurpose space in largest room (PC309) to accommodate larger number of students designing, collaborating, and presenting projects to all students (and guests) throughout the semester. Room should reflect a workplace setting as much as possible. Optimizing the use of the space has been an ongoing goal and with program growth it has become essential.

4. Develop a six year district budget replacement plan to ensure computer technology (software and hardware) is maintained at or above industry standards.

5. Increase utilization of technology in Drafting and Design Technology Program courses.

12. Evaluation Criteria – Quality

Drafting and Design Technology is a career technical and transfer program. Recent consolidation of courses improves visibility of individual and integrated disciplines, facilitates efficient scheduling, and increases the number of students completing their education goal due to IGETC classes added to the program.

Students completing courses in the Drafting and Design Technology Program acquire understanding, knowledge, skills and abilities in the areas of disciplines of Architecture, Engineering Drawing and Computer Generated Imagery. In addition to discipline specific content, students are engaged in project learning aligned with 21st century themes, including learning and innovation skills (creativity, critical thinking/problem solving, effective application, communication, and collaboration); and information, media and advanced technology skills (information, media, advanced technology, and communications literacy at or above current industry standards). Student success rates average above 80% and are supported by student transfer and job success.

COMMENDATIONS:
1. Student learning outcomes have been developed for all Drafting and Design Technology Program classes. Drafting and Design Technology Program classes been revised and developed for Fall 2011.

2. Faculty are constantly updating skills via conferences, workshops and as presenters of workshops. The Drafting and Design Technology Program faculty are culturally and professionally diverse.

3. Students are very active members of the American Society of Engineers and Architects. Over the last five years students have won a minimum of $2,000.00 in scholarships per year.

4. The American Society of Engineers and Architects recognized Dr. Fernandes as Professor of the Year in 2006 and 2007. Flint Tabata, adjunct faculty, was recognized by the organization as Professor of the Year in 2010.

RECOMMENDATIONS:
1. Revise Drafting and Design Technology - Architecture Program classes to facilitate expansion of the program and meet the demands of the workplace and the Intern Development Program (IDP).

13. Evaluation Criteria – Feasibility

We plan to increase utilization of technology in Drafting and Design Technology Program courses by expanding access to hardware/software. The NAAB (National Architectural Accredation Board), ACSA (Association of Collegiate Schools of Architecture) and NCARB (National Council of Architecture Registration Boards) have set a new policy for studio culture (lab).

COMMENDATIONS:
1. Faculty members continue to apply for and receive Perkins grants and additional support from industry (Disney computer donation) to upgrade the equipment for the Drafting and Design Technology Program.

2. Students are currently able to use the lab facilities for class assignments during professor office hours.

RECOMMENDATIONS:
none

14. Evaluation Criteria – Compliance

Drafting and Design Technology is a recognized transfer program to the California State University, University of California and private university systems through articulation and via portfolio review.

COMMENDATIONS:
1. Existing Course Outlines are updated to reflect new requirements.

RECOMMENDATIONS:
1. Annually review Drafting and Design Technology Program syllabi, course outlines, and course prerequisites, and the long-range plan in respect to State and District requirements.

2. Annually review the Drafting and Design Technology Program by faculty and the Advisory Committee to ensure relevancy to the needs of the business world, the State of California Architectural Board's Intern Development Program (IDP), and articulation with California State University, University of California, and private university systems via portfolio review.

15. Evaluation Criteria – Other

16. Recommendations

Rank	Description of recommendation (actions or behaviors to be completed)	Responsible person(s)	Target Date	Personnel	Facilities	Equip. / Software	Supplies
1	Both software and hardware must be maintained at or above industry standards. A six year replacement plan is required to ensure that compliance of software and hardware is maintained at or above industry standards and that state-of-the-art technology, Hardware/Software, is integrated within the curriculum.	Lancaster Fernandes	ongoing	☐	☐	☒	☐
2	One additional faculty with minimum qualifications for Computer Aided Design (CAD), Computer Generated Imagery (DRAF 101, 160, 161, 190, 290) and Architecture; increase adjunct pool for Design Visualization (DRAF 102 and ARCH 102).	Lancaster Fernandes	unknown	☒	☐	☐	☐
3	Expand access to hardware / software – open lab on alternating hours so students can access and have time in the lab to collaborate and complete projects in the school setting. Create a multipurpose space in largest room (PC309) to accommodate larger number of students designing, collaborating, and presenting projects to all students (and guests) throughout the semester. Room should reflect a workplace setting as much as possible. Optimizing the use of the space has been an ongoing goal and with program growth it has become essential.	Fernandes	unknown	☐	☒	☐	☐
4	Seek expansion of IGETC articulation agreements with four and five-year institutions regarding ARCH 100, ARCH 102 AND DRAF 102. The major Universities to focus on are Cal Poly, Cal State LA, SciARC, Cal State Fullerton, Berkeley, and UCLA.	Fernandes	ongoing	☒	☐	☐	☐
5	Portfolio review is used as a part of student articulation for transfer to	Fernandes	Fall 2012	☒	☐	☐	☐

	Universities. It is understood that portfolio review encompasses the extent of skills acquired by a student in the Drafting Technology Program. Therefore, it is important for the Drafting and Design Technology Program to work with the Citrus College Transfer Center to be sensitive to this process as it relates to students who seek to transfer to either public or private universities.						
6	Annually review the Drafting and Design Technology Program by faculty and the Advisory Committee to ensure relevancy to the needs of the business world, the State of California Architectural Board's Intern Development Program (IDP), program syllabi, course outlines, and course prerequisites, and the long-range plan in respect to State and District requirements.and articulation with California State University, University of California, and private university systems via portfolio review.	Fernandes	0ngoing	☒	☒	☒	☒
7	Become an Affiliate Member of the ACSA (Association of Collegiate Schools of Architecture). There are only twelve Community Colleges in the world that are members of ACSA. Members are institutions that do not qualify for, or are not seeking, accreditation by the National Architectural Accrediting Board (NAAB) or California Architects Board (CAB). Such institutions include schools in countries other than the US and Canada, programs at community colleges and or other fields related to architecture and landscape architecture.	Fernandes	Spring 2014	☒	☐	☐	☐

17. Budget Recommendations

Resources are needed in the following areas:

Certificated Personnel (FNIC)

Position	Discuss impact on goals / SLOs	Impact ◊	Priority ‡
Full time	CAD and CGI (DRAF 160,161, 190, 290, 291, AND ARCH	N	B
Adjunct	Design Visualization DRAF 102 and ARCH 102	N	B

Classified Personnel

Position	Discuss impact on goals / SLOs	Impact ◊	Priority ‡
Lab Assistant	Open lab on hours when professors can not help students due to classes or no professor is available.	N	B

Facilities

Facilities / repairs or modifications needed	Discuss impact on goals / SLOs	Bldg / Room	Impact ◊	Priority ‡
Studio Area	Increase utilization of technology in Drafting and Design Technology Program courses by expanding access to hardware/software. The NAAB (National Architectural Accrediting Board), ACSA (Association of Collegiate Schools of Architecture) and NCARB (National Council of Architectural Registration Boards) have set a new policy for studio culture (lab). "The school is expected to demonstrate a positive and respectful learning environment through the encouragement of the fundamental values of optimism, respect, sharing, engagement, and innovation between and among the members of its faculty, student body, administration, and staff. The school should encourage students and faculty to appreciate these values as guiding principles of professional conduct throughout their careers. The Advisory Committee has recommended the creation of a multipurpose studio space to accommodate larger number of students designing, collaborating, and presenting projects to all students (and guests) throughout the semester. Room should reflect a workplace setting as much as possible. Optimizing the use of the space has been an ongoing goal and with program growth it has become essential. The multipurpose studio space (lab) should be open from	PC-306 and/or 309	N	B

	7:00pm to 10:00pm so students can access and have time in studio to collaborate and complete projects in the studio setting.			

Computers / Software (Tecs)

Item	Discuss impact on goals / SLOs	Cost	Impact ◊	Priority ‡
PC 304/309	Software Update in Budget	$10,000.00 annual	N	B
PC304 /309	Software to be bought	$15,033.00	N	B

Equipment

Item	Discuss impact on goals / SLOs	Cost	Impact ◊	Priority ‡
PC 304	Need 27 Monitors	$8,100.00	N	B
PC 309	Need 36 Monitors *Note: a 6-year plan to replace hardware bi-annually (25 PCs x 3 purchase periods) is needed to support robust design software required in the industry.	$10,800	N	B

Supplies (Division)

Item	Discuss impact on goals / SLOs	Cost	Impact ◊	Priority ‡
PC 304/309	Paper/ supplies	$1600.00	N	B

Additional information:

Advisory Committee meeting minutes are on file with the Office of Academic Affairs.

◊ **Impact:**
M = Mission: Does program meet the District's mission and established core competencies? Does program reflect the District's diversity?
N = Need: How is program addressing needs based on labor market data, enrollment, articulation, advisory committee, regional agreements, etc.?
Q = Quality: Are lecture/lab unit values appropriate? Have the course outlines been reviewed / updated regularly? Are disciplines appropriate? Is faculty development adequate? Does program support State and District emphasis on critical thinking, problem solving and written expression? Does program meet stated objectives in the form of SLOs? Are course pre-requisites and co-requisites validated?
F = Feasibility: Are facilities, equipment, and library resources adequate? Are evening programs and services adequate? Are course offerings frequent enough for students to make adequate progress in both day and evening programs? Does the program have adequate communication with & support from Counseling?
C = Compliance: Do course requisites meet Federal, State & District requirements? Do the course outlines meet state, district & federal regulations for content? Do vocational programs have regular advisory meetings?

‡ **Priority: (Note: When discussing priority, consider the following and address in Column 2)**
A. Is this goal mandated by law, rule, or district policy?
B. Is this goal essential to program success?
C. Is this goal necessary to maintain / improve program student learning outcomes?

Attachment A: Program of Study

Drafting and Design Technology A.S. Degree

Drafting and Design Technology includes such majors as Architecture, Engineering Drawing and Computer Generated Imagery (CGI). **Students should complete the core courses and one area of emphasis:**

Architecture Emphasis: design principles and CAD are applied to problems in Architecture, Landscape Architecture and Urban Planning. Proper and efficient methods of sketching, story boarding, models and multifaceted presentations are explored.

Employment opportunities: Entry level - CAD person / Design Person

Engineering Drawing Emphasis:, CAD courses and Mechanical Drawing courses provide a foundation for such majors as Architecture, Computer Generated Imagery and Engineering

Employment opportunities: Entry level Computer Aided Design (CAD) - CAD person/Draftsperson

Computer Generated Imagery (CGI) Emphasis: provide for majors such as Architecture, Computer Generated Imagery (CGI), Engineering and Animation. Design principles, CAD and animation systems are applied to problems in animation, architecture, landscape architecture, urban planning and engineering. Proper and efficient methods of sketching, story boarding, 3D digital models, animations and multifaceted presentations' are examined.

Employment opportunities: Entry level - Animation Modeler.

This degree requires meeting the Citrus College General Education and proficiency requirements combined with successful completion (grades of "C" and above) of the following major requirements:

Complete all of the following Drafting and Design Technology core courses:	
NEW CLASS – NAME - UNITS	**OLD CLASS– NAME - UNITS**
DRAF102 Visual Communication 2.5	DRAF 102 Technical Illustration 2.5
OR	OR
ARCH102 Visual Communication 2.5	DRAF 158 Perspective 2
DRAF160 Intermediate Computer Aided Design (CAD) 2.5	DRAF 160 Introduction to Architectural CAD 2 OR DRAF 109 OR ENGR 125
DRAF161 Advanced Computer Aided Design (CAD) 2.5	DRAF 161 Residential CAD 2 OR DRAF 111 Advanced Computer Aided Design
ARCH100 Introduction to Architecture 3	DRAF 150 Introduction to Architecture 3
DRAF290 Introduction to Maya Practices. 3	DRAF 290 Learning Maya Introduction 3 OR DRAF 190 Computer Imaging Practices
13.5 UNITS - core courses +	

ARCHITECTURE EMPHASIS **Complete all of the following Architectural courses:**	
NEW CLASS – NAME - UNITS	**OLD CLASS– NAME - UNITS**
ARCH110 Introduction to Architectural Communication and Functional Design 3	DRAF 151 Basic Floor Plans and Functional Design 3
ARCH111 Basic Architectural Design 3	DRAF 152 Basic Residential Structure 3
ARCH200 Portfolio Preparation 3	DRAF 149 Introduction to Portfolio Preparation 3
ARCH201 Architectural Design I 3	DRAF 153 Advanced Residential Detailing and Design 3
ARCH202 Architectural Design II 3	DRAF 154 Commercial and Industrial Buildings 3
ARCH250 History of Architecture: Prehistory to Mannerism. 3	
ARCH251 History of Architecture: Baroque to the Present Day 3	
AS DEGREE - 13.5 + 21 = 34.5 UNITS	
OR **ENGINEERING DRAWING EMPHASIS** **Complete all of the following Engineering Drawing courses:**	
NEW CLASS – NAME - UNITS	**OLD CLASS– NAME - UNITS**
DRAF103 Advanced Engineering Drawing 3	DRAF 103 Advanced Mechanical Drawing 3
PHYS110 Introduction to College Physics 4	
AS DEGREE - 13.5 + 7 = 20.5 UNITS	
OR **COMPUTER GENERATED IMAGERY (CGI) EMPHASIS** **Complete all of the following Computer Generated Imagery (CGI) courses:**	
NEW CLASS – NAME - UNITS	**OLD CLASS– NAME - UNITS**
DRAF291 Learning Maya Transitions 3	DRAF 291 Learning Maya Transitions 3
ARCH200 Portfolio Preparation 3	DRAF 149 Introduction to Portfolio Preparation 3
ART111 Beginning Drawing 3	
ART115 Figure Drawing I 3	
ART120 Two-Dimensional Design 3	
ART121 Three-Dimensional Design 3	
AS DEGREE - 13.5 + 18 = 31.5 UNITS	

Attachment B: Key Performance Indicator data

	Key Performance Indicators				Winter08	Winter09	Winter10
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Program Access						
1	Majors (total)						
2	New Majors						
3	Courses Offered						
4	Sections Offered						
5	Morning Sections						
6	Afternoon Sections						
7	Evening Sections						
8	Arranged Sections						
9	Weekend Sections						
10	Short Term Sections						
11	DistanceEd Full-Term Sections						
12	DistanceEd Short-Term Sections						
13	Enrollment						
14	Weekly Student Contact hours (WSCH)				0.0	0.0	0.0
15	Full-Time Equivalent Students (FTES)						
	Program Resources						
16	Full-Time Equivalent Faculty (FTEF)						
17	Credit Reimbursement Rate				**$3,668.28**	**$3,834.46**	**$3,834.46**
	Program Operation						
18	WSCH/FTEF						
19	FTES/FTEF						
20	Fill Rate at Census						
	Program Success						
21	Course Retention						
22	Course Success						

	Key Performance Indicators	Spring05	Spring06	Spring07	Spring08	Spring09	Spring10
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Program Access						
1	Majors (total)						
2	New Majors						
3	Courses Offered	6.0	7.0	7.0	8.0	8.0	7.0
4	Sections Offered	6.0	8.0	12.0	13.0	12.0	7.0
5	Morning Sections	3.0	5.0	4.0	5.0	5.0	5.0
6	Afternoon Sections	2.0	2.0	2.0	2.0	2.0	2.0
7	Evening Sections	1.0	1.0	6.0	6.0	5.0	
8	Arranged Sections						
9	Weekend Sections						
10	Short Term Sections	0.0	0.0	0.0	0.0	0.0	0.0
11	DistanceEd Full-Term Sections	0.0	0.0	0.0	0.0	0.0	0.0
12	DistanceEd Short-Term Sections						
13	Enrollment	53	80	95	97	107	61
14	Weekly Student Contact hours (WSCH)	231.3	390.0	435.5	485.5	546.4	347.4
15	Full-Time Equivalent Students (FTES)	7.9	13.4	14.9	15.0	16.9	10.7
	Program Resources						
16	Full-Time Equivalent Faculty (FTEF)	1.5	2.0	3.2	3.8	3.8	2.0
17	Credit Reimbursement Rate	**$2,922.30**	**$3,259.71**	**$3,476.34**	**$3,668.28**	**$3,834.46**	**$3,834.46**
	Program Operation						
18	WSCH/FTEF	156.3	195.0	135.2	127.1	145.7	172.0
19	FTES/FTEF	5.4	6.7	4.6	3.9	4.5	5.3
20	Fill Rate at Census	55.3	73.4	51.5	44.4	62.7	70.0
	Program Success						
21	Course Retention	96.2	83.8	93.7	100.0	97.2	93.4
22	Course Success	84.9	78.8	88.4	79.4	82.2	73.8

	Key Performance Indicators	Summer04	Summer05	Summer06	Summer07	Summer08	Summer09
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Program Access						
1	Majors (total)						
2	New Majors						
3	Courses Offered						
4	Sections Offered						
5	Morning Sections						
6	Afternoon Sections						
7	Evening Sections						
8	Arranged Sections						
9	Weekend Sections						
10	Short Term Sections						
11	DistanceEd Full-Term Sections						
12	DistanceEd Short-Term Sections						
13	Enrollment						
14	Weekly Student Contact hours (WSCH)	0.0	0.0	0.0	0.0	0.0	0.0
15	Full-Time Equivalent Students (FTES)						
	Program Resources						
16	Full-Time Equivalent Faculty (FTEF)						
17	Credit Reimbursement Rate	**$2,922.30**	**$3,259.71**	**$3,476.34**	**$3,668.28**	**$3,834.46**	**$3,834.46**
	Program Operation						
18	WSCH/FTEF						
19	FTES/FTEF						
20	Fill Rate at Census						
	Program Success						
21	Course Retention						
22	Course Success						

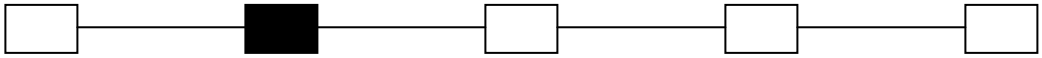
			04-05		05-06		06-07		07-08		08-09		09-10	
			Year1		Year2		Year3		Year4		Year5		Year6	
Gender														
	DRAF-A	Female	18	20.7%	28	28.6%	19	20.2%	18	18.8%	27	25.5%	32	27.8%
	DRAF-A	Male	69	79.3%	70	71.4%	75	79.8%	77	80.2%	78	73.6%	81	70.4%
	DRAF-A	Missing							1	1.0%	1	0.9%	2	1.7%
	DRAF-A	Total	87	100.0%	98	100.0%	94	100.0%	96	100.0%	106	100.0%	115	100.0%
Age														
	DRAF-A	19 or younger	48	55.2%	34	34.7%	34	36.2%	36	37.5%	34	32.1%	53	46.1%
	DRAF-A	20-24	22	25.3%	46	46.9%	43	45.7%	48	50.0%	53	50.0%	45	39.1%
	DRAF-A	25-29	3	3.4%	7	7.1%	7	7.4%	7	7.3%	8	7.5%	7	6.1%
	DRAF-A	30-34	2	2.3%	5	5.1%	4	4.3%	2	2.1%	5	4.7%	4	3.5%
	DRAF-A	35-39	3	3.4%	3	3.1%	1	1.1%	1	1.0%	2	1.9%	1	0.9%
	DRAF-A	40-49	5	5.7%	2	2.0%	4	4.3%	1	1.0%	1	0.9%	2	1.7%
	DRAF-A	50 and above	4	4.6%	1	1.0%	1	1.1%	1	1.0%	3	2.8%	3	2.6%
	DRAF-A	Total	87	100.0%	98	100.0%	94	100.0%	96	100.0%	106	100.0%	115	100.0%
Ethnicity														
	DRAF-A	Asian	8	9.2%	11	11.2%	11	11.7%	7	7.3%	8	7.5%	3	2.6%
	DRAF-A	Black or African American		0.0%	1	1.0%	1	1.1%					1	0.9%
	DRAF-A	Hispanic/Latino	36	41.4%	54	55.1%	44	46.8%	54	56.3%	61	57.5%	43	37.4%
	DRAF-A	American Indian or Alaska Native			1	1.0%	1	1.1%			2	1.9%		0.0%
	DRAF-A	Native Hawaiian or Other Pacific Islander											1	0.9%
	DRAF-A	White	33	37.9%	22	22.4%	26	27.7%	29	30.2%	25	23.6%	20	17.4%
	DRAF-A	Unknown/Non-Respondent	10	11.5%	9	9.2%	11	11.7%	6	6.3%	10	9.4%	47	40.9%
	DRAF-A	Total	87	100.0%	98	100.0%	94	100.0%	96	100.0%	106	100.0%	115	100.0%
Educational Goal														
	DRAF-A	Degree & Transfer	42	48.3%	53	54.1%	55	58.5%	15	15.6%	22	20.8%	42	36.5%
	DRAF-A	Transfer	26	29.9%	27	27.6%	22	23.4%	1	1.0%	11	10.4%	14	12.2%
	DRAF-A	AA/AS	3	3.4%	5	5.1%	1	1.1%	6	6.3%	12	11.3%	12	10.4%
	DRAF-A	License	1	1.1%	3	3.1%	1	1.1%			1	0.9%		
	DRAF-A	Certificate	3	3.4%	2	2.0%	2	2.1%	1	1.0%	3	2.8%	4	3.5%
	DRAF-A	Job Skills	6	6.9%	2	2.0%	4	4.3%	1	1.0%	3	2.8%	8	7.0%
	DRAF-A	Basic Skills							1	1.0%	1	0.9%		
	DRAF-A	Personal											2	1.7%
	DRAF-A	Undecided							2	2.1%	7	6.6%	15	13.0%
	DRAF-A	Not Reported	6	6.9%	6	6.1%	9	9.6%	69	71.9%	46	43.4%	18	15.7%
	DRAF-A	Total	87	100.0%	98	100.0%	94	100.0%	96	100.0%	106	100.0%	115	100.0%

	Key Performance Indicators	**2004-05**	**2005-06**	**2006-07**	**2007-08**	**2008-09**	**2009-10**
		Year1	**Year2**	**Year3**	**Year4**	**Year5**	**Year6**
	Program Resources						
23	Revenue: FTES*Reimbursement Rate	$51,776.92	$85,404.40	$95,703.64	$93,210.99	$115,647.31	$104,143.93
24	Total District Adopted Program Budget	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
25	Support Personnel (wage without benefit, 2200 and 2400 in budget)	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
26	Supplies (4300 in budget)	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
27	Cost	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
28	Total FTES for the year	17.73	26.2	27.53	25.41	30.16	27.16
29	Cost Per FTES						
30	Degree: Drafting Technology -- CAD			0	8	10	7
31	Certificates: Architectural Drafting: CAD			1	0	1	1
32	Skill Awards						
33	Licenses (reported by department)						
	Career Technical Education Programs						
34	VTEA Grant						
35	Industry Contributions to Program Resources						
36	Available Jobs						
37	Attach one copy of the three most recent College Core Indicator Information forms for each of the appropriate TOP codes						
38	Please include "Student Satisfaction" and "Employer Satisfaction" in the program review write-up.						
39	Labor market data						

Attachment C: Labor Market Information

1. *Purpose of this Program*

Significantly Changed Purpose In the Last Two Years | Minor Changes in Purpose in the Last Two Years | No Changes in Purpose in the Last Two Years



Drafting and Design Technology MISSION

The **mission** of the **Drafting and Design Technology** Department is to provide a challenging learning environment that integrates traditional and computer-based learning. The **internal goals** are to empower Students to be actively involved in a collaborative, interdisciplinary process in which they:

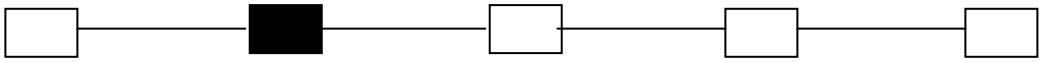
- Develop critical-thinking, problem-solving, teamwork and presentation skills needed for living in the twenty-first century.
- Learn to use technology to access, organize, compile, analyze, and create new information.
- Become independent learners and original thinkers who will work to improve the human condition.
- Prepare to continue their study at the University level.
- Experience ethical and personal growth.

The **external goals** of the Drafting Technology Department are to:

- Serve as a working model for Design Technology educational innovation and reform.
- Foster partnerships with the business com

2. *Demand for this Program*

High Demand | Adequate Demand for our students | Low Demand



(Current labor market projections for this career (EDD or other source):

CAD, CGI and Environmental Engineering

Employers report moderate difficulty in finding qualified applicants. Further they indicated both a requirement and preference for prospective employees who had technical vocational training in the CAD, 3D, and 3D animation software.

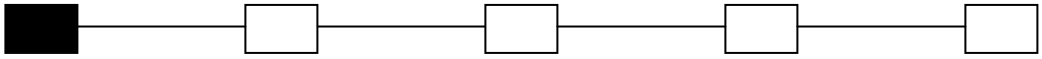
Source: www.labormarketinfo.edd.ca.gov.

Area	Estimated Year-Projected Year	Employment Estimated	Employment Projected	Employment Change Number	Employment Change Percent	Annual Avg Openings
Los Angeles County	2006 - 2016	19,870	25,030	5,160	26.0	981
Orange County	2006 - 2016	1,470	1,860	390	26.5	73
Riverside-San Bernardino MSA	2006 - 2016	1,340	1,720	380	28.4	69

Area	Year	Period	Hourly Mean	Hourly by Percentile 25th	Median	75th
Los Angeles-Long Beach-Glendale Metro Div	2011	1st Qtr	$47.55	$31.53	$40.20	$53.05

3. *Quality of this Program*

Highest Quality | Meets Student Needs | Needs Significant Improvement



Advisory Comments

List your **accomplishments**, with special reference to **"What is the Future for Design Technology Schools**"

- Advances in software
- Developed presentation, communication and time management skills.
- Involvement in actual community service projects.

CGI Group

List your **accomplishments**, with special reference to **"What is the Future for Design Technology Schools**"

- Software availability for students relative to the CGI industry.
- Faculty training
- Alternative teaching tools / Digital tutors.com

Engineering Group

List your **accomplishments**, with special reference to **"What is the Future for Design Technology Schools**"

- Articulation with Cal State LA Engineering and Technology Department.
- Articulation with area high schools.

Architectural Group

Spend enough time to imagine concretely the **Design Technology Schools** in which your group wants to work. This is an exercise in creative dreaming – of the kind of community you want to work toward…

- Apprenticeship program.
- Sustainable design taught in all classes.
- Office environment /experience
- Introduction to materials and methods will be necessary due to software such as Revit. Project Management classes.
- Guest Speaker program for the Draf 150 class. Create new history of architecture classes that meet GE requirements for transfer.
- Higher emphasis on 3D Technology. Existing software cannot be used because computers do not meet standards.

CGI Group

Spend enough time to imagine concretely the **Design Technology Schools** in which your group wants to work. This is an exercise in creative dreaming – of the kind of community you want to work toward…

- Software availability for students relative to the CGI industry such as Maya 2009, SoftImage and 3Dstudio Max.
- Upgrade hardware to meet the demands of existing advanced 3D software.
- High school / Citrus College open house.
- General Marketing of CGI program.
- Company Sponsorships

Engineering Group

Spend enough time to imagine concretely the **Design Technology Schools** in which your group wants to work. This is an exercise in creative dreaming – of the kind of community you want to work toward…

- Green friendly schools are self-sufficient. The physical learning environment has a positive effect on student learning.
- Fundamentals of Drafting continue to be taught.
- Articulation from high school to Community College to University is the norm.
- Students are creating and rapid prototyping simple projects. The Community College sponsors competitions to involve high school students.

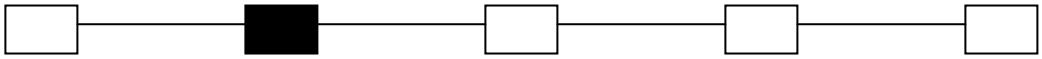
Core Indicator Data

		Performance Goal	My Program
Indicator One:	Skill Attainment	88.81%	90.00%
Indicator Two:	Completions	82.05%	85.00%
Indicator Three:	Persistence & Transfer	85.96%	87.50%
Indicator Four	Employment	82.21%	81.82%
Indicator Five:	Nontraditional – Participation	20.37%	17.50%
	Nontraditional – Completions	22.10%	19.05%

The Drafting Technology Program must specifically address Male Employment (80.33% = -0.335%), MALE nontraditional Achievement (87.88% = -0.05%), nontraditional participation (17.00% = -2.05%) and nontraditional completion (19.05% = -0.67%). The integrity and quality of the Drafting Technology Program must be maintained and improved for nontraditional students.

4. *External Issues*

Benefits From and Contributes to External Issues | Complies with External Issues | Not Consistent with External Issues



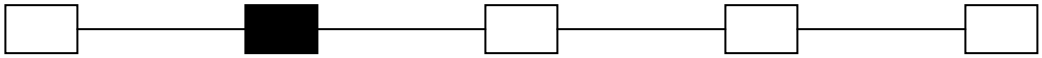
(Comments including legislation, CCCCO mandates, VTEA, Tech Prep, CalWORKs, WIA, BOG Career Ladders, etc.)

The **external goals** of the Drafting Technology Department are to:

- Serve as a working model for Drafting Technology educational innovation and reform.
- Foster partnerships with the business community.

5. *Cost of this Program*

Income Exceeds Expenditures | Income Covers Expenditures | Expenditures Exceed Income



Data :

Drafting - A	FTES	TSCH	FTEF	TSCH/FTEF	Student Successful Course Completion	State Average Student Successful Course Completion
F 2005	13	374	1.7	221	76%	
F 2007	10	338	2.6	133	84%	
F 2009	16	533	2.4	224	81%	

Drafting - M	FTES	TSCH	FTEF	TSCH/FTEF	Student Successful Course Completion	State Average Student Successful Course Completion
F 2005	12	336	2.5	137	71%	
F 2007	9	283	2.1	135	70%	
F 2009	14	447	2.6	170	66%	

Drafting - C	FTES	TSCH	FTEF	TSCH/FTEF	Student Successful Course Completion	State Average Student Successful Course Completion
F 2005	4	117	0.9	127	54%	
F 2007	2	58	0.8	76	67%	
F 2009	3	106	0.9	121	74%	

Engineering	FTES	TSCH	FTEF	TSCH/FTEF	Student Successful Course Completion	State Average Student Successful Course Completion
F 2005	6	171	1.7	99	76%	
F 2007	3	113	1.4	80	75%	
F 2009	5	152	2.0	76	80%	

Career Technical Education Programs

TOP CODE: 0953 DRAFTING TECHNOLOGY

CORE INDICATORS

Indicator	Negotiated Level	2008-09 (Actual)	2009-10 (Actual)	2010-11 (Actual)	2011-12 (Proposed)
1. Technical Skill Attainment	88.81%		100.00	90.00	91.49
2. Credential, Certificate, or Degree	82.05%		85.71	85.00	100.00
3. Persistence or Transfer	85.96%		89.19	87.50	100.00
4. Placement	81.72%		75.00	81.82	71.43
5. Nontraditional Participation	20.37%		18.92	17.50	19.15
6. Nontraditional Completion	25.99%		18.75	19.05	28.00