DRAFTING TECHNOLOGY
Architecture, Computer Generated Imagery, and Mechanical Drafting
Program Review
2006-2007

Spring 2007

Prepared for
Citrus Community College
By:

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Eric Rabitoy, Dean of Science, Engineering, and Health Sciences

Citrus College

**DRAFTING TECHNOLOGY - Architecture,
Computer Generated Imagery,
and Mechanical Drafting
Program Review
COMMITTEE MEMBERS
2006-2007**

Richard J. Fernandes, Full-Time Faculty
Susanna Au, Adjunct Faculty
Eric Rabitoy, Dean of Science, Engineering, and Health Sciences
Lillian LaSpina Administrative Secretary
Chris Pagano, Administrative Secretary
Matt Jackson, Academic Senate Representative
Dennis Korn, Curriculum Representative
Irene Malmgren, Vice President of Instruction
Michelle Plug, Articulation Officer
Lucinda Over, Dean of Counseling
John Thompson, Dean of Library and Information Services
Linda Welz, Chief Information Services Officer

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DRAFTING TECHNOLOGY - <u>Architecture, Computer Generated Imagery, and Mechanical Drafting</u> FACULTY

FULL-TIME FACULTY:

Dr. Richard J. Fernandes AIA

ADJUNCT FACULTY:

Susanna Au Associate AIA
Kimberly Bowen AIA
Flint Tabata

DRAFTING TECHNOLOGY – <u>ARCHITECTURE</u>

Advisory Committee

Susanna Au Architecture Citrus College	Michael Moore East San Gabrial ROP	Bruce Stoner Electronics Instructor Citrus College
Dexter Tanksley AIA Walt Disney Imagineering	Bernard Barroga CSGV ROP	Jose Villanueva AIA Walt Disney Imagineering
Kim Holland Director, Vocational Ed. Citrus College	Adrian Erb, Architect Long Beach Community College	Daryl Akioka Drafting Azusa High School
Dr. Virgil Seaman Cal State University LA Dept. of Technology	Sherry Griffes Past Student President ASEA	Mary Ann Rachford Art Professor Citrus College
Jess Kuncar Architect Walt Disney Imagineering	Tom Paton Paton and Associates AutoCAD	Frank Paton Paton and Associates AutoCAD
Dr. William Husung Retired Drafting Instructor Citrus College	Kimberly Bowen AIA Architect Instructor Citrus College	Ken Zamora AIA Architect Instructor, Fresno City College
Prof. George Proctor AIA Department of Architecture Cal Poly Pomona	Terry Damron Dean of Science and Engineering Citrus College	Aaron Ruiz Architect, Teacher Glendora High
Elanie Moore Art Professor Citrus College	Matt Jackson Art Professor Citrus College	Joe Serar Engineer Glendora
Dr. Richard Fernandes AIA Architect Professor Citrus College	Sidney Pedraza Architect Diamond Bar	Troy Aday AIA Aday Architects Glendora

DEGREE AND LIST OF CERTIFICATES OFFERED

In addition to an AS degree in Drafting Technology and a transfer program, the following certificates are available:

ARCHITECTURAL CERTIFICATES:

ARCHITECTURAL DESIGN
REQUIRED COURSES: ART 111, 120,
121, 188; DRAF 158, 161, 190
Entry level Design Development

ARCHITECTURAL DRAFTING-CAD
REQUIRED COURSES: ART 153,
DRAF 109 or ENGR 125; DRAF
150, 151, 152, 154,160
EMPLOYMENT OPPORTUNITY:
Entry level Architectural Drafter

COMPUTER GENERATED IMAGERY (CGI) CERTIFICATES:

COMPUTER GENERATED IMAGERY (CGI)
REQUIRED COURSES:
DRAF 102, 109, 111, 190
ART 120, 121, and 215
Entry level 3D CGI modeling

MECHANICAL DRAFTING CERTIFICATES:

DRAFTING TECHNOLOGY-CAD
REQUIRED COURSES:
ART 111, 153
DRAF 101 or 112; DRAF 109 or ENGR 125; DRAF 102, 103, 111
Entry level CAD

ADVANCED DRAFTING TECHNOLOGY -CAD
REQUIRED COURSES:
Drafting Technology – CAD Certificate plus
ART 188; DRAF 190, 198; ENGR
130; MATH 130; PHYS 110
Entry level CAD Design Development

DRAFTING TECHNOLOGY - <u>ARCHITECTURE SEQUENCE OF COURSES</u>

Architectural Courses

DRAF 149 Introduction to Architectural
Computer Generated Imagery and Design
Technology

DRAF 150 Introduction to Architecture

DRAF 151 Basic Residential Floor Plans
and Functional Design

DRAF 152 Basic Residential Structure Design and Drafting

DRAF 153 Advanced Residential Detailing and Design

DRAF 154 Commercial and Industrial Buildings

DRAF 158 Perspective

DRAF 160 Introduction to Architectural CAD

DRAF 161 Residential CAD

Architectural Drafting Ancillary Courses:

DRAF 109 Intermediate Computer Aided Drafting

DRAF 190 Computer Imaging Practices
for Industry and Architecture

ART Ancillary Courses:

ART 111 Beginning Drawing

ART 120 Two-Dimensional Design

ART 121 Three-Dimensional Design

ART 153 Digital Media Productions I
Previously: ENGR 110

ART 188 Multimedia Portfolio and
Resume Production

Engineering Ancillary Courses:

ENGR 125 Introduction to Engineering

The Architectural program has one class (Draf 149) that has not been offered in the last few semesters. The Architectural department has decided not to eliminate this class from the program. The DRAF 149 class will be revised and made part of the Architectural Drafting-CAD Certificate in the near future to include Architectural portfolio design for transfer and job placement.

DRAFTING TECHNOLOGY - <u>COMPUTER GENERATED IMAGERY (CGI) SEQUENCE OF COURSES</u>

ART Ancillary Courses:

ART 120 Two-Dimensional Design

ART 121 Three-Dimensional Design

ART 215 Figure Drawing I

Engineering Ancillary Courses:

ENGR 125 Introduction to Engineering
CAD

DRAFTING TECHNOLOGY - <u>MECHANICAL DRAFTING SEQUENCE OF COURSES</u>

MECHANICAL DRAFTING Courses:

DRAF 101 Mechanical Drawing

DRAF 102 Technical Illustration

DRAF 103 Advanced Mechanical Drawing

DRAF 109 Intermediate Computer Aided Drafting

DRAF 111 Computer Aided Design and Drafting Mechanical

DRAF 112 Introduction to Computer Aided Design
(CAD) and Mechanical Drawing

DRAF 189 History and Theory of Design

DRAF 190 Computer Imaging Practices for Industry
and Architecture

DRAF 198 Special Problems in Drafting

ART Ancillary Courses:

ART 111 Beginning Drawing

ART 153 Digital Media Productions I
Previously: ENGR 110

ART 188 Multimedia Portfolio and
Resume Production (3)
Previously: ENGR 115

Engineering Ancillary Courses:

ENGR 125 Introduction to Engineering

ENGR 130 Engineering Graphics

Math Ancillary Courses:

MATH 130 Elementary Algebra

Physics Ancillary Courses:

PHYS 110 Introduction to College Physics

The Drafting 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) are as follows:

Institutional General Education Competencies-
Part of Institutional Mission

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 certificates from Citrus College, must demonstrate effectively assessed awareness, understanding, knowledge, skills, and abilities in the selected competencies.

1. Communication (personal expression and information acquisition)

   Examples
   Reading analytically and critically   Speaking articulately
   Writing with clarity and fluency   Listening actively

2. Computation

   Examples
   Technology   Computer proficiency
   Math proficiency   Decision analysis
   Analyzing and using numerical data   (Synthesis and evaluation)
   Application of mathematical concepts and reasoning

3. Creative, Critical, and Analytical Thinking

   Examples
   Curiosity   Research
   Analysis   Learning Strategies
   Synthesis   Problem Solving
   Evaluation   Decision making
   Creativity   Aesthetic awareness

4. Community, Critical, and Analytical Thinking

   Examples
   Respect for others beings   Citizenship
   Cultural awareness   Interpersonal skills
   Ethics   Lifelong learning
   Community service   Self esteem
   Integrity   Empathy

5. Technology/information competency

   Examples
   Basic computing and word processing

6. Discipline/subject Area Specific Content Material - Project Plan

PROGRAM DESCRIPTION

The Drafting Technology Program encompasses an area of study which includes basic and advanced design, management principles, CAD, and 3D animation software. The Drafting Technology Program has outstanding dedicated faculty preparing students for transfer to universities, advancing professional careers, and personal development. The program combines classroom lectures, demonstrations, and an extensive use of state-of-the-art technology making certain training is always current.

Program Student Learning Outcomes:

Drafting Technology students will have a broad understanding of Drafting Technology. Students will be able to design, interpret, analyze, and evaluate drawings commonly used to create projects.

Drafting Technology students completing courses in the Drafting Technology Program will have acquired understanding, knowledge, skills and abilities in the following competencies:

Communication
Drafting Technology students will use proper vocabulary and notation when describing Drafting Technology concepts. They will be able to communicate these concepts to others both verbally and in written form. They will be able to critically analyze Architectural, Computer Generated Imagery, and Engineering information found in print, visual or online media such as technical and non-technical books, journals, articles, web pages, television, and film.

Computation
Drafting Technology students will apply Drafting Technology concepts in mathematical form using the appropriate computational skills for the course. This may include numeric calculation using simple algebra, graphical analysis, the evaluation of trigonometric expressions and technical drawings.

Creative, Critical, and Analytical Thinking
Drafting Technology students will develop an understanding of and curiosity toward the technical world through problem solving, decision making, and critical thinking skills to develop an understanding of interactions in the technical world as evidenced by successful completion of drafting program courses.

Community, Global Consciousness
Drafting Technology students will 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 lab and/or on projects, students develop interpersonal skills and respect for others. Through team learning, they will acquire an understanding for the need of Lifelong Learning.

Technology/Information Competency
Drafting Technology students will be adept at using computers for word processing, data analysis, tutorials, simulations and/or web-based research as appropriate for each course. For laboratory courses, students will demonstrate fundamental aptitudes in the proper use of mechanical and/or electrical devices. Specific skills such as AutoCAD and MAYA and other applications will be used in appropriate courses.

Discipline Specific Content
Drafting Technology students will demonstrate an understanding of the fundamental principles of Drafting Technology at levels appropriate to each course. Students will distinguish between technical and non-technical questions and methods and understand Drafting Technology as a process. Students will understand the complex problems involved in valid technology and engineering.

DRAFTING TECHNOLOGY
Program Goals:

- Provide transfer credit to four and five-year colleges and universities.
- Meet the student learning outcomes and core competencies institutionalized by Citrus College.
- Provide basic knowledge and skills for students.
- Prepare students to enter the job market.
- Provide courses required for students to complete the certificates and/or Associate of Science degree.
- Provide classes for enrichment and upgrading of skills for students currently employed.
- Provide classes to support other curricular areas on campus.

Program Student Learning Outcomes (SLO - COURSE OBJECTIVES and COURSE CONTENT) are described in detail in each of the Drafting Technology class course outlines (SEE Appendix A).

Presently SLO's are stated as **COURSE OBJECTIVES and COURSE CONTENT** which will be revised and developed according to the schedule stated in this document. To meet the goals specified in the program description, the curriculum has been developed to achieve four primary objectives:

- Transfer Program - The Drafting Technology Program is designed to meet the needs of those who intend to transfer to a four or five-year college or university. These students should consult with the particular four or five-year institution they plan to attend to further evaluate this option. Transfer is via portfolio review.

- Vocational Instruction - The Drafting Technology Program is designed to meet the needs of individuals who want to upgrade current knowledge and skills for employment.

- Drafting Technology Certificate Program and/or Associate in Science Degree - Provide courses required for students to complete the Architectural Certificate Program and/or Associate of Science degree.

- Education for Adults - Adult education is a vital part of the total educational program. Classes are scheduled day and night. The Drafting Technology Program provides life long learning opportunities for currently employed persons.

SLO TIMELINE
The DRAFTING TECHNOLOGY – **ARCHITECTURAL** Program will revise and
develop student learning outcomes for all architectural classes offered at Citrus College
based on the following schedule:

Course Title   **Projected Date to Develop Course Outline**

DRAF 149......Introduction to Architectural Computer Generated Imagery....August 2007

DRAF 150......Introduction to Architecture..March 2008

DRAF 151......Basic Residential Floor Plans and Functional Design..............August 2008

DRAF 152......Basic Residential Structure Design and Drafting.....................August 2008

DRAF 153......Advanced Residential Detailing and Design.............................March 2009

DRAF 154......Commercial and Industrial Buildings.......................................March 2009

DRAF 160......Introduction to Architectural CAD...August 2009

DRAF 161......Residential CAD..August 2009

The DRAFTING TECHNOLOGY – **COMPUTER GENERATED IMAGERY (CGI)**
Program will revise and develop student learning outcomes for all Computer Generated
Imagery (CGI) classes offered at Citrus College based on the following schedule:

Course Title   **Projected Date to Develop Course Outline**

DRAF 102......Technical Illustration..August 2007

DRAF 109......Intermediate Computer Aided Drafting (CAD)........................March 2008

DRAF 111......Computer Aided Design and Drafting-Mechanical (CADD)...August 2008

DRAF 190......Computer Imaging Practices for Industry and Architecture.....August 2008

DRAF 290......Learning Maya...March 2009

DRAF 291......Learning Maya Transitions...March 2009

DRAF 292......Character Animation in Maya...August 2009

DRAF 293......Maya 4.5 Dynamics...August 2009

DRAF 294......Maya Rendering 4.5...March 2010

DRAF 295......Introduction to Maya Embedded Language...............................March 2010

DRAF 296......Maya Accelerator..August 2010

DRAF 297......Maya Cloth..August 2010

The DRAFTING TECHNOLOGY – **Mechanical Drafting Program** will revise and
develop Student Learning Outcomes for all MECHANICAL DRAFTING classes offered
at Citrus College based on the following schedule:

Course Title   Projected Date to Develop Course Outline

DRAF 101......Mechanical Drawing..August 2008

DRAF 102......Technical Illustration ....March 2007

DRAF 103......Advanced Mechanical Drawing...August 2009

DRAF 109......Intermediate Computer Aided Drafting (CAD).........................March 2008

DRAF 111......Computer Aided Design and Drafting Mechanical (CADD) ...August 2008

DRAF 112......Intro. to Comp. Aided Design (CAD) and Mech. Drawing.......March 2010

DRAF 189......History and Theory of Design..August 2010

DRAF 190......Computer Imaging Practices for Industry and Architecture .....August 2008

DRAF 198......Special Problems in Drafting..August 2010

Any new classes developed will have student learning outcomes developed when the
curriculum is submitted to the curriculum committee.

The department will work with the curriculum committee to ensure the course outlines
are being developed according to standards developed by the committee.

MISSION

COMMENDATIONS:

1. The Drafting Technology Program meets the mission and the core competencies of the District.

2. The Drafting Technology Program meets the stated objectives for the program's student learning outcomes (SLOs).

3. The Drafting Technology Program stresses problem solving, teamwork, communication skills, computation, use of technology and critical/analytical thinking as part of each course.

4. The Drafting Technology Program provides occupational education for students preparing for employment.

5. Drafting Technology Program continues to attract students from culturally diverse groups. (See Core Indicators Demographics)

6. The Drafting Technology Program course sequence leads logically toward program goals and the content of the courses reinforces the college core competencies. (See Core Indicators 85% Retention)

PREVIOUS RECOMMENDATIONS COMPLETED:

1. The Drafting Technology Program has integrated state-of-the-art technology into instruction and lab facilities.

2. Revised the course sequencing of Drafting Technology.

3. Eliminated DRAF 100, 104, 105, 108, 110, and 140.

4. Revision of Drafting Technology Program classes to facilitate expansion of the program and meet the demands of the workplace.

RECOMMENDATIONS:

1. Continue to integrate current technology into the current Drafting Technology Program curriculum.

2. Continue to list the Drafting Technology Program Certificates in the College Catalog and update periodically to keep current.

3. List appropriate cross referencing of Architectural Drafting under Architecture in the College Catalog and class schedule.

4. 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 Technology Program. (See Core Indicators, Females only represent 25% of enrollment).

5. Continue to review and enhance the Drafting Technology major for the Associate of Science degree (AS).

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

7. Continue to revise Drafting Technology - Architecture classes to facilitate expansion of the program and meet the demands of the workplace and the Intern Development Program (IDP).

8. Continue to initiate contact with the local business community and the Advisory Committee to provide input that will enhance the Drafting Technology Program.

NEED

COMMENDATIONS:

1. The Drafting Technology Program is constantly changing to meet the demands of the workplace through Advisory Council recommendations.

2. The Drafting Technology Program has course offerings scheduled in the day and evening to meet the needs of students.

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

PREVIOUS RECOMMENDATIONS COMPLETED:

1. Expanded courses articulate to four and five-year institutions via portfolio review as required by the various institutions.

2. Course sequencing allows students to accomplish their goals in two years. A full-time student is able to complete both the Drafting Technology Program Certificates in two years.

3. Clarified current Drafting Technology certificate structure with the Chancellor's Office personnel.

4. Evaluated and revised specific Drafting Technology Program class content in order to better prepare students for employment or transfer.

RECOMMENDATIONS:

1. Continue to seek expansion of articulation agreements with four and five-year institutions regarding portfolio review. The major Universities to focus on are Cal Poly, Cal State LA, SciARC, Cal State Fullerton, and UCLA.

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

3. Work with the Advisory Committee to establish an Annual Drafting Technology Program contest at Citrus for high school students.

4. Work with Counseling and the Transfer Center to obtain an extensive understanding of the Drafting Technology Program.

5. Continue to articulate with local high schools.

6. Continue to review offerings during the day and evening as student demand increases.

7. Continue to increase utilization of technology in Drafting Technology Program courses. Both software and hardware must be maintained at or above industry standards.

8. Continue to initiate contact with the local business community and the Advisory Committee to provide input that will enhance the Drafting Technology Program.

QUALITY

COMMENDATIONS:

1. Student learning outcomes are being developed for all Drafting Technology Program classes in the program. Architectural DRAF 149 and 151 are currently under development with other Drafting Technology Program classes to be revised and developed according to the schedule stated in this document.

2. Faculty in the Drafting Technology Program meet District qualifications.

3. The Drafting Technology Program faculty are diverse.

4. Drafting Technology Program courses demand critical thinking at all levels to insure student success.

5. Faculty development is exemplary for the Drafting Technology Program. Faculty are constantly updating skills via conferences, workshops and as presenters of workshops.

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

7. The American Society of Engineers and Architects has recognized a Citrus professor as professor of the year for 2004 and 2005.

PREVIOUS RECOMMENDATIONS COMPLETED:

1. Course articulation with four and five-year institutions via portfolio review as required by the various institutions.

2. Based upon continuing input from the Advisory Committee, The Drafting Technology Program changes to remain current with the needs of the industry.

3. Faculty members attend certification classes, in-services, conferences, and conventions to update their expertise.

4. Labs have state-of-the-art computer equipment and software programs.

5. Labs have the latest audio-visual equipment.

6. Faculty members have applied for and received grants to fund the purchase of media equipment for the department.

RECOMMENDATIONS:

1. Continue to maintain and expand the use of the Advisory Committee in setting the direction of the Drafting Technology Program.

2. Continue to work with Advisory Committee to establish a wider range of internships and job opportunities.

3. 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 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.

4. Develop, revise, and integrate Student Learning Outcomes into each Drafting Technology Program course outline and syllabus according to the schedule stated in this document.

5. The Drafting 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.)

6. Drafting Technology Program class descriptions should be reviewed and modified as needed.

7. As is feasible, the various disciplines within the current Drafting Technology - Architecture Program should integrate the State of California Architectural Board's Intern Development Program (IDP) currently being implemented in 2005.

8. Continue to revise Drafting Technology - Architecture Program classes to facilitate expansion of the program and meet the demands of the workplace and the Intern Development Program (IDP).

FEASIBILITY

COMMENDATIONS:

1. Faculty members continue to apply for and receive grants and additional financial support above normal budgetary augmentations to upgrade the equipment for the Drafting Technology Program.

2. Faculty members continue to be leaders in incorporating technology into their instructional program.

3. Software and equipment in the labs is constantly being upgraded to meet Drafting Technology Program standards.

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

PREVIOUS RECOMMENDATIONS COMPLETED:

1. Faculty members continue to apply for and receive grants and additional financial support above normal budgetary augmentations to upgrade the equipment for the Drafting Technology Program.

2. Faculty members continue to be leaders in incorporating technology into their instructional program.

3. Software and equipment in the labs is constantly being upgraded to meet Drafting Technology Program standards.

4. Evaluated the extent to which several separate discipline areas can integrate their courses into the overall Drafting Technology Program. Courses were revised and removed from curriculum.

5. Expansion of the Drafting Technology Program through an online community of learners through the use of the Atlantis website.

RECOMMENDATIONS:

1. The Drafting 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.

2. Continue to integrate state-of-the-art technology within the curriculum. Both software and hardware must be maintained at or above industry standards.

3. Additional promotion of the Drafting Technology Program via Drafting Technology student ambassadors. Ambassadors should have the necessary communication skills.

4. Provide access to the Citrus College web site for online student portfolio presentation.

5. Continue to expand the Drafting Technology Program through an online community of learners.

COMPLIANCE

COMMENDATIONS:

1. The Drafting Technology Program articulates with the California State University, University of California, and private university systems via portfolio review. (05-06 the Drafting Technology Program had 18 known transfer students to Cal Poly, Cal State LA, and SciARCH.).

2. Course requisites meet Federal, State and District requirements.

3. Existing Course Outlines are being updated to reflect new requirements.

4. The Drafting Technology Program articulates with five local secondary institutions: Cal Poly, CSULA, SciARCH, New School of ARCH-San Diego, Woodbury University.

5. Students in the Drafting Technology Program are committed to community service – City of Hope, Save the Hollywood Bowl, shelters for the homeless, designing for the elderly and many other projects.

6. The Drafting Technology Program meets State and District regulations.

7. The Architecture Program continues to integrate the State of California Architectural Board's Intern Development Program (IDP) currently being implemented.

RECOMMENDATIONS:

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

2. Continue course review of the Drafting 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.

Key Program Performance Indicator	01-02 Year 1	02-03 Year 2	03-04 Year 3	04-05 Year 4	05-06 Year 5
Program Access					
Majors	N/A	N/A	N/A	N/A	N/A
New Majors	N/A	N/A	N/A	N/A	N/A
Courses Offered					
Day	18	20	20	22	22
Evening	12	14	13	16	22
Weekend	0	0	0	0	0
Short Term	0	0	0	0	0
Distance Education	0	0	0	0	0
Classes Offered (# of sections)					
Day	19	20	20	22	24
Evening	11	16	13	16	22
Weekend	0	0	0	0	0
Short Term	0	0	0	0	0
Distance Education	0	0	0	0	0
Registrations					
Weekly Student Contact Hours	1,300	1,513	1,360	1,352	1,735
Full-Time Equivalent Students	43.3	50.4	45.3	45.1	57.8
Non-Traditional/Special Populations	0	0	0	0	0

Key Program Performance Indicator	01-02 Year 1	02-03 Year 2	03-04 Year 3	04-05 Year 4	05-06 Year 5
Program Resources					
Full-Time Equivalent Faculty	1.8	2.0	1.6	1.8	2.0
Credit Reimbursement Rate	2,794.76	2,850.73	2,790.53	2,922.30	3,259.71
Revenue-FTES x Reimbursement Rate	121,106	143,772	126,504	131,698	188,520
Total District Program Budget	113,293	123,242	123,468	133,863	142,371
Personnel	106,092	112,007	106,858	121,018	137,868
Grants	0	0	0	0	0
Supplies	356	0	390	1,147	0
Industry Contributions Maya training for Adjunct Professor		5,000	5,000	5,000	5,000
Industry Contributions AutoCAD workshops and Advisory	1,000	3,000	3,000	3,000	3,000
VTEA	49,600	66,000	81,900	60,817	72,905

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

Available Jobs for:
Architectural and Civil Drafters

Please Note: This is one of many choices.

Area	Estimated Year-Projected Year	Employment Estimated	Employment Projected	Employment Change Number	Percent	Annual Avg Openings
Los Angeles County	2002 - 2012	6,930	7,390	460	6.6	156
Orange County	2002 - 2012	3,340	4,050	710	21.3	124
Riverside-San Bernardino MSA	2002 - 2012	1,830	2,340	510	27.9	80

Occupational Wages
Architectural and Civil Drafters

Area	Year	Period	Hourly Mean	Hourly by Percentile 25th	Median	75th
Los Angeles-Long Beach-Glendale Metro Div	2006	1st Qtr	$21.77	$16.17	$21.20	$26.97

Key Program Performance Indicator	01-02 Year 1	02-03 Year 2	03-04 Year 3	04-05 Year 4	05-06 Year 5
Program Efficiency					
Productivity – WSCH/FTEF (525=good)	361.1	387.9	425.0	375.6	433.8
Average Class Size (based on concurrent classes = 1 class)	19.7	20.4	22.0	19.6	22.4
Fill Rate at Census (based on seat load)	85.2%	81.8%	83.2%	76.4%	83.5%
FTES per FTEF	24.1	25.9	28.3	25.0	28.9
Cost per FTES	2,614	2,444	2,724	2,970	2,462
Cost per Major	N/A	N/A	N/A	N/A	N/A
Program Success					
Course Retention (D or better)	190 (90%)	224 (76%)	208 (84%)	175 (85%)	254 (85%)
Course Success – Any Course (C or better)	187 (88%)	225 (76%)	203 (82%)	173 (84%)	253 (85%)
Course Success – Next Course (C or better)					
Course Success – Advanced Course(C or better))					
Major Persistence	N/A	N/A	N/A	N/A	N/A
Degrees Awarded	6	4	6	6	6
Certificates Awarded		1			
Skills Awards - Alias MAYA Co. Certificate	N/A	10	10	12	14
Licenses	N/A	N/A	N/A	N/A	N/A
Transfers	No Data				
Performance Following Transfer	No Data				
Student Satisfaction*	No Data				
Employment Rate*	No Data				
Employment Retention*	No Data				
Employer Satisfaction*	No Data *vocational programs only				

Key Program Performance Indicator		01-02 Year 1	02-03 Year 2	03-04 Year 3	04-05 Year 4	05-06 Year 5
Student Demographic Data						
Gender	Female	52 (22%)	56 (20%)	66 (25%)	46 (19%)	75 (25%)
Gender	Male	181 (78%)	229 (80%)	197 (75%)	198 (81%)	227 (75%)
Age	< 17	2 (1%)	0	5 (2%)	0	0
Age	17 - 19	76 (33%)	103 36%)	107 (41%)	107 (44%)	105 (35%)
Age	20 - 24	91 (39%)	96 (34%)	89 (34%)	75 (31%)	126 (42%)
Age	25 - 29	16 (7%)	23 (8%)	25 (10%)	23 (9%)	35 (12%)
Age	30 - 39	21 (9%)	25 (9%	13 (5%)	12 (5%)	23 (8%)
Age	40 - 49	21 (9%)	26 (9%)	15 (6%)	14 (6%)	8 (3%)
Age	50 - 59	5 (2%	7 (2%)	4 (2%)	11 (5%)	3 (1%)
Age	60 - 69	1 (0%)	4 (1%)	5 (2%)	2 (1%)	2 (1%)
Ethnicity	Hispanic	102 (44%)	118 (41%)	118 (45%)	108 (44%)	156 (52%)
Ethnicity	Caucasian	77 (33%)	97 (34%)	85 (32%)	87 (36%)	78 (26%)
Ethnicity	Black	7 (3%)	5 (2%)	8 (3%)	4 (2%)	6 (6%)
Ethnicity	Asian	17 (7%)	23 (8%)	19 (7%)	17 (7%)	25 (8%)
Ethnicity	Filipino	11 (5%)	12 (4%)	12(5%)	8 (3%)	11 (4%)
Ethnicity	Native American	8 (3%)	7 (2%)	3(1%)	0	1 (.3%)
Ethnicity	Pacific Islander	0	2 (.7%)	0	1 (.4%)	1 (.3%)
Ethnicity	Other Non White	4 (1%)	3 (1%)	2(.7%)	3 (1%)	10 (3%)
Ethnicity	Unknown	7 (3%)	18 (6%)	16 (6%)	16 (7%)	14 (5%)
ED Goal	AA or AS Degree	15	27	20	19	22
ED Goal	Degree & Transfer	113	126	128	107	144
ED Goal	Transfer No Deg	58	68	73	66	80
ED Goal	Certificate	13	12	9	9	11
ED Goal	Job Skills	23	25	10	20	13
ED Goal	Personal	10	26	23	17	21
ED Goal	Unknown	1	1	0	6	11