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# Public Works Program Review



## 2005-2006

### Citrus College

Prepared by:

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FULL TIME FACULTY: None

ADJUNCT FACULTY: Issa Adawiya  
John Mura  
Robert Swartz

ADVISORY COUNCIL: Issa Adawiya, L.A. County Dept of Public Works  
Richard Bennett, L.A. City Public Works  
John Campbell, City of San Dimas  
Ed Cline, Traffic Consultant  
Steve Esbenshade, City of Duarte  
Vince Mastrosimone, City of Covina  
John Mura, City of Chino Hills  
Vince Ramos, City of Claremont  
Mollie Smith, Dean, Palomar College  
Robert Swartz, L.A. County Dept of Public Works

PROGRAM REVIEW TEAM:

Issa Adawiya, Adjunct Faculty and Public Works Advisory Council  
Fullmer Chapman, Public Works Advisory Council  
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Steve Lindsey, Dean of Business  
Irene Malmgren, Vice President of Instruction  
John Mura, Adjunct Faculty and Public Works Advisory Council  
Lucinda Over, Dean of Counseling  
Robert Swartz, Adjunct Faculty and Public Works Advisory Council  
John Thompson, Dean of Library  
Gailynn White, Academic Senate Representative

DEGREE OFFERED: Associate of Science in Applied Arts

CERTIFICATE OFFERED: Public Works Certificate Level I  
Public Works Certificate Level II

CERTIFICATES ISSUED:

	2000-01	2001-02	2002-03	2003-04	2004-05
Level I	2	2	1	1	4
Level II/III*	3	2	1	0	1

\*Level III was collapsed into Level II in 2002

SEQUENCE OF COURSES REQUIRED FOR PUBLIC WORKS CERTIFICATES:

<p>Public Works Level I</p>	<p><u>Required:</u> <i>PUB 150 Introduction to Street Construction &amp; Maintenance</i>  <i>PUB 151 Street Construction &amp; Maintenance</i>  + Any Public Works class  +Any Public Works class  <i>MATH 115 Business Mathematics (or higher level math)</i></p> <p><u>Plus one:</u> <i>CSIS 107 Fundamentals of Information Technology</i>  <i>BUS 132 Ethics in Business</i>  <i>BUS 150 Business English</i>  <i>BUS 152 Business Communications</i>  <i>SPCH 100 Interpersonal Communication</i>  <i>SPCH 101 Public Address</i>  <i>PHL 108 Philosophy - Ethics</i></p>
<p>Public Works Level II</p>	<p><u>Completion of Level I plus required:</u>  <i>PUB 160 Public Works Administration</i>  + Any Public Works class  +Any Public Works class  <i>CSIS 130 Microcomputer Applications I</i></p> <p><u>Plus two:</u> <i>BUS 172 Personnel Management</i>  <i>BUS 175 Introduction to Management</i>  <i>BUS 176 Management for Office Personnel</i>  <i>PUB 166 Supervision in Public Works</i>  <i>SPCH 100 Interpersonal Communication</i>  <i>SPCH 101 Public Address</i></p>

INSTITUTIONAL COMPETENCIES

1. Communication (personal expression and information acquisition)
  - Reading analytically and critically
  - Speaking articulately
  - Listening actively
  - Writing with clarity and fluency
  
2. Computation
  - Application of mathematical concepts
  - Technology
  
3. Creative, Critical, and Analytical Thinking
  - Synthesis
  - Evaluation
  - Problem solving
  - Decision making

4. Community
  - Respect for others
  - Ethics
  - Community service
  - Interpersonal skills
  - Lifelong learning
  - Integrity
5. Technology / Information Competency
  - Basic computing and word processing
6. Discipline / Subject Area Specific Content Material
  - Public Works concepts and skills

#### PROGRAM DESCRIPTION

The Citrus College Public Works program prepares new personnel for public works occupations and provides upgrading for career promotions. Job opportunities exist in both the public and private sectors.

#### OBJECTIVES:

1. This program prepares the student to enter the field of public works with knowledge and skills currently required in this industry.
2. The program prepares students who are currently employed in the public works industry with upgraded skills for advancement.

## I. MISSION

### **COMMENDATIONS:**

- The Public Works program is consistent with the Citrus College mission.
- This program offers an occupational Certificate and a degree to prepare students for careers in the public works industry.
- Citrus College was the first community college to offer a Public Works program in 1968. In 2006, there are only five California community colleges offering a Public Works program.
- A consistent rotation of classes has been offered in this small and highly specialized program so that student access to Certificate classes is assured.
- Public Works distance education courses allow students who live far outside of the Citrus College district to access classes.

### **PROGRESS TOWARD PREVIOUS RECOMMENDATIONS:**

- From 1999: Integrate Public Works with appropriate transfer coursework such as Math, Water Technology, and Architecture.

*The Public Works Certificate has course requirements and electives in Math, Computer Science & Information Systems, Business, Speech, and Philosophy.*

- From 1999: Connect with professional organizations such as ACIA (American Construction Inspectors Association), APW (American Public Works), and MSA (Maintenance Superintendents Association), to promote quality programming.

*MSA has proven to be an enthusiastic partner for the Citrus College Public Works program. MSA has helped to advertise Citrus College classes and we are currently working together to create a standardized certificate for community colleges that would be endorsed by MSA in the western states for public works employees. The Director and Advisory Council members will follow up on partnering with APW and ACIA.*

- From 1999: Prepare students for the Land Survey In Training exam.

*Public Works curriculum includes topics and issues relevant to the Land Survey In Training (LSIT) exam. Currently, training for the LSIT exam is available at Cal Poly Pomona and UC Riverside. Advisory Council members will discuss again whether it is feasible for Citrus College to design a new program to compete with the Universities. The pass rate for the state exam is currently around 8%.*

### **RECOMMENDATIONS:**

- By headcount, there are approximately 100 Public Works students enrolled at Citrus College at any given time, most taking one class per semester. A portion of these students are working toward their Public Works Certificate. The

Certificate requires six classes which, for the typical Public Works student, would take six semesters to complete. It would therefore be expected that approximately 10 or more certificates should be awarded annually. It is recommended that staff increased their efforts in identifying eligible students to apply for their Public Works Certificate.

- Though employees in the public works industry are overwhelmingly male, it is recommended that a concerted effort be put forth to attract female students into the program.

## II. NEED

SIMILAR PROGRAMS AT OTHER COLLEGES: Palomar College, Santiago Canyon College, Victor Valley College, Los Angeles Trade Tech.

### **COMMENDATIONS:**

- Registration in this program has grown 11% over the past five years.
- The Public Works program at Citrus College has a strong and positive reputation for serving the needs of the industry.
- The Maintenance Superintendents' Association has sought the partnership of Citrus College to create a standardized certificate to be recognized by MSA for public works employees in the western United States.
- With the increase from three classes per semester to four to accommodate the distance education offerings, productivity numbers in this program decreased. An adjustment back to three classes, two traditional and one distance education, is scheduled for fall 2006. As registration increases, a fourth class may be reinstated.
- Public Works agency job fliers and promotion opportunity notices are made available to Citrus College students in their classes.

### **PROGRESS TOWARD PREVIOUS RECOMMENDATIONS:**

- From 1999: Promote the Public Works Program and employer incentives to the industry

*The Public Works program has been promoted through the MSA listserv as well as through the efforts with MSA to create a standardized certificate for the western United States.*

- From 1999: Offer a Public Works course via distance education  
*Public Works distance education began in the spring of 2003. Three Public Works courses are approved for delivery via distance education. As other colleges come on-line with Public Works classes, students from a wide geographic area will be able to complete their certificate with less commuting.*

- From 1999: Recruitment and marketing of course offerings might help increase enrollment to avoid class cancellations.

*Each semester, a flier for the Public Works program is printed with Certificate requirements on one side and the next semester's Public Works course offerings on the other side. In addition, MSA has helped Citrus College to advertise its classes via their listserv.*

### **RECOMMENDATIONS:**

- It is recommended that a promotional slick be developed for the Public Works program.
- It is recommended that the new Outreach Coordinator be consulted regarding promotion of the Public Works program.

### **III. QUALITY**

#### **COMMENDATIONS:**

- Student Learning Outcomes have been written by faculty for every Public Works course; course descriptions and texts have been updated.
- Classroom technology, including critical thinking software, is utilized by Public Works faculty, enhancing the learning environment for students.
- Course retention across all Public Works classes has ranged between 82% and 98% over the past five years.
- Course success, students completing with a grade of C or better, has ranged between 80% and 95% across all Public Works classes over the past five years.
- This program continues to be served exclusively by adjunct professors who are public works professionals, working in the field, bringing currency to the classroom every week.
- Citrus Public Works courses and Certificates carry weight in job interviews and promotion considerations.
- Coursework and Certificate requirements are kept current and aligned with industry standards through regular review by the Citrus College Public Works Advisory Council.
- Adjunct professors have volunteered their time to write Student Learning Outcomes for this program, providing a stronger learning environment for students and a higher level of accountability for the College.

#### **PROGRESS TOWARD PREVIOUS RECOMMENDATIONS:**

- From 1999: Courses required for the Public Works certificate should be available to students in a reasonable time span



*Public Works classes are rotated in a manner that allows students to complete the Level I or Level II certificate in as few as two semesters. A broad list of electives allows for choices among those classes that are scheduled in other departments.*

- From 1999: There needs to be some diversity in the Public Works Program faculty with regard to gender and ethnicity

*There is some diversity among the adjunct faculty with regard to ethnicity. At this time, a qualified female instructor has not yet been identified.*

#### **RECOMMENDATIONS:**

- Recognizing the lack of gender balance in this industry, it is recommended that an emphasis is placed on the recruitment of women.
- All syllabi will be revised by the fall 2006 semester to reflect the new Student Learning Outcomes.
- Syllabi should be consistent with regard to a statement of accessing service for students with disabilities.
- The new Wingspan system will be explored to determine if it can flag students who are eligible for certificates and to track those awarded.

#### **IV. FEASIBILITY**

##### **COMMENDATIONS:**

- The Public Works program revenue has increased nearly 25% over the past five years; in 2004-05, revenue was over 300% of budget.
- No special labs are required for the Public Works program, making this a vocational program with very low overhead.

##### **PROGRESS TOWARD PREVIOUS RECOMMENDATIONS:**

- From 1999: The Public Works Program would benefit from consistent and appropriate classroom space.

*Public Works classes do not have designated classroom space, but scheduling has been permitted in consistent and appropriate classrooms for faculty and student convenience.*

- From 1999: The Public Works Program will need equipment for the new survey class which will require approximately \$10,000

*It has since been decided that the survey class is not necessary at this time.*

## V. COMPLIANCE WITH REGULATIONS, LICENSES, STANDARDS

### **COMMENDATIONS:**

- The Public Works Advisory Council continues to provide regular updates on regulations, licenses, and industry standards.

CITRUS COLLEGE  
Public Works Program Review  
2005-2006  
**Key Performance Indicators**

<b>Key Performance Indicator</b>	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005
<b><i>Program Access</i></b>					
Courses offered	6	6	6	7	8
Registrations	181	136	191	176	208
Weekly Student Contact Hours	543	408	573	528	624
Full-Time Equivalent Students	18.1	13.6	19.1	17.6	20.8
<b><i>Program Resources</i></b>					
Credit Reimbursement Rate	2689.33	2794.76	2850.73	2790.53	2922.30
Revenue	\$48,677	\$38,009	\$54,449	\$49,113	\$60,784
Full-Time Equivalent Faculty	.6	.6	.6	.7	.8
Personnel	0	0	0	0	0
District Program Budget	14,509	15,976	17,630	16,313	19,631
<b><i>Program Efficiency</i></b>					
Productivity = WSCH/FTEF	905	680	955	754	780
Average Class Size	30	23	32	25	26
Fill Rate – based on seat max 40	75%	58%	80%	63%	65%
FTES per FTEF	30.2	22.7	31.8	25.1	26
Cost per FTES – Budget/FTES	\$801	\$1175	\$923	\$927	\$944
<b><i>Program Success</i></b>					
Course Retention – D or better	148	128	176	172	178
Percent Retention	82%	94%	92%	98%	86%
Course Success – C or better	144	127	173	168	176
Percent Success	80%	93%	91%	95%	85%
Degrees Awarded	4	1	1	3	3
Certificates Awarded	5	4	2	1	5