

PUBLIC WORKS

Public Works, a career technical program, provides the foundational knowledge and training that prepare students for entry-level employment or advancement in public works occupations.

Job opportunities include:

- Public Works Contract Administrator
- Public Works Maintenance Worker,
- Public Works Supervisor
- Public Works Construction Inspector
- Arborist, and
- landscape or park management worker.

Upon completion of the courses in this discipline as well as the general education requirements, students may earn an associate degree in public works. Students may also earn certificates of achievement in:

- Public Works Administration
- Public Works Maintenance Services
- Greenscape Maintenance Technology
- Hardscape Maintenance Technology
- Public Works Inspection
- Public Works Supervision and Management

Contact Information

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Career, Technical and Continuing Education

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Discipline Website

<https://www.citruscollege.edu/academics/programs/pub> (<https://www.citruscollege.edu/academics/programs/pub/>)

Learning Outcomes

This discipline prepares students to do the following:

- Describe and explain the fundamentals of street maintenance.
- Describe and explain the ability to read and interpret plans.
- Properly demonstrate a clear understanding of inspection records, duties, and job diary techniques.
- Demonstrate a clear understanding of codes and ordinances.
- Explain how to effectively use resources to administer infrastructure maintenance.
- Demonstrate knowledge of equipment and techniques used for street maintenance.

- Explain preventative methods and materials, emphasizing the importance of the need for longevity, in street construction and maintenance.

Courses

PUB 150

Introduction to Public Works

3 Units (AA/AS)

54 lecture hours

Grade Mode: Pass/No Pass, Standard Letter

Strongly recommended: ENGL 101.

This course provides an overview of the various functions, tasks, activities and environments of the Public Works industry sector and its disciplines. Course covers the various aspects of public works construction including heavy civil construction based on current public works common practices, systems, processes, recognized standard construction documents, codes, regulations, basic means and methods, key participants, professional ethics, as well as current and future trends. Emphasis is in examining the various public works disciplines and career opportunities; helping prepare students for their public works career and serving the construction industry at large.

PUB 151

Street Construction and Maintenance

3 Units (AA/AS)

54 lecture hours

Grade Mode: Pass/No Pass, Standard Letter

Strongly recommended: ENGL 101.

A course in street maintenance covering materials and methods, with emphasis on preventive maintenance of Asphaltic and Portland Cement concrete pavements. Specifications, records and cost accounting systems, as well as revenue sources and budget preparation, will be reviewed. Other subjects include safety, drainage, equipment records and specifications, review of watershed management, and public relations. Codes which pertain to improvements and repair will be reviewed.

PUB 155

Public Works Construction Inspection

3 Units (AA/AS)

54 lecture hours

Grade Mode: Pass/No Pass, Standard Letter

Strongly recommended: ENGL 101.

This course provides a comprehensive overview of construction inspection and materials testing processes relevant to general engineering construction in the public works sector, including street surface and subsurface construction improvements; consideration will be given to examining the various types of inspections, code versus contracts, inspection records, duties, responsibilities, compliance and resolution; as well as interpersonal communication skills. Emphasis will be on exploring the various career opportunities in construction inspection.

PUB 157**Asphalt and Portland Cement Concrete****3 Units (AA/AS)****54 lecture hours****Grade Mode: Pass/No Pass, Standard Letter***Strongly recommended: ENGL 101.*

A comprehensive course in Asphalt and Portland Cement concrete construction technology following the standards of the Asphalt Institute, standard specifications for public works construction, American Concrete Institute and the Portland Cement Association. Included will be design production, proportioning, batching, transportation, placement, consolidation, compaction and finishing of the material. Evaluation of surface defects, maintenance, inspection and safety will be covered.

PUB 158**Municipal and Urban Tree Care****3 Units (AA/AS)****54 lecture hours****Grade Mode: Pass/No Pass, Standard Letter***Strongly recommended: ENGL 101.*

A course in tree care for persons currently employed or seeking future employment in the public works or private landscape industry: tree anatomy, physiology, pruning, cabling, identification, root structure and its effects on infrastructure, soil management and irrigation are covered in detail. The course is designed to prepare students to pass the Tree Worker Certification and/or pass the certified arborist exam given by the Western Chapter, International Society of Arboriculture.

PUB 159**Urban Forest Management Planning****3 Units (AA/AS; CSU)****54 lecture hours****Grade Mode: Pass/No Pass, Standard Letter***Strongly recommended: Successful completion of Student Learning Outcomes from one or more Public Works classes.*

This course will guide students in developing an urban forest management plan. It is intended for those who manage populations of trees: municipalities, golf courses, educational institutions, public gardens, and property managers. Plans will be based on interdisciplinary activities that influence and are related to urban forest activities. Students will create a ready-to-use management plan and receive peer review.

PUB 160**Public Administration****3 Units (AA/AS)****54 lecture hours****Grade Mode: Pass/No Pass, Standard Letter***Strongly recommended: ENGL 101.*

A basic course covering the overview of local government functions from the perspective of a public works agency; the constraints of operation; techniques of administration in planning, organizing, financing, and personnel; the traditional model of a public works organization and new advances in technology.

PUB 161**California Occupational Safety and Health****3 Units (AA/AS)****54 lecture hours****Grade Mode: Pass/No Pass, Standard Letter***Strongly recommended: ENGL 101.*

Introduction to public works construction project safety, OSHA requirements, Injury and Illness Prevention Program (IIPP), roles, functions, common construction hazards, accident costs, liability laws, field safety methods and controls.

PUB 163**Turf and Landscape Management****3 Units (AA/AS)****54 lecture hours****Grade Mode: Pass/No Pass, Standard Letter**

This course prepares students to enhance the function and aesthetic value of public and private landscapes. Topics include planting, pruning, irrigation, soil fertility, turf, pest management, weed control, and landscape management business practices.

PUB 164**Plan Reading and Cost Estimating****3 Units (AA/AS)****54 lecture hours****Grade Mode: Pass/No Pass, Standard Letter***Strongly recommended: ENGL 101.*

A course provides students with the foundational knowledge to read and interpret civil plans related to Public Works construction within the public right-of-way. Course includes performing quantity take-offs used in estimating time, material, labor, and equipment needed for public works projects.

PUB 165**Environmental Management****3 Units (AA/AS; CSU)****54 lecture hours****Grade Mode: Pass/No Pass, Standard Letter***Strongly recommended: PUB 150.*

This course is an overview of environmental issues in a municipal setting. Topics include water quality, watershed management, integrated waste management, air pollution control, regulatory compliance, sustainability, and related issues.

PUB 166**Supervision in Public Works****3 Units (AA/AS)****54 lecture hours****Grade Mode: Pass/No Pass, Standard Letter***Strongly recommended: ENGL 101.*

Fundamentals of supervision with emphasis on the public works environment. Topics to be covered include the role of the supervisor; functions as applied to leading and motivation, coaching employees, counseling, interpersonal human relations skills, Union MOUs and the progressive disciplinary process.

Programs

Associate Degree

- A.S. in Public Works Administration (<http://catalog.citruscollege.edu/disciplines/public-works/public-works-as/>)

Certificates of Achievement

- Greenscape Maintenance Technology (<http://catalog.citruscollege.edu/disciplines/public-works/greenscape-maintenance-technology-certificate-achievement/>)
- Hardscape Maintenance Technology (<http://catalog.citruscollege.edu/disciplines/public-works/hardscape-maintenance-technology-certificate-achievement/>)
- Public Works Administration (<http://catalog.citruscollege.edu/disciplines/public-works/public-works-administration-certificate-achievement/>)
- Public Works Inspection (<http://catalog.citruscollege.edu/disciplines/public-works/public-works-inspection-certificate-achievement/>)
- Public Works Maintenance Services (<http://catalog.citruscollege.edu/disciplines/public-works/public-works-maintenance-services-certificate-achievement/>)

Skill Award

- Public Works Supervision and Management (<http://catalog.citruscollege.edu/disciplines/public-works/public-works-supervision-management-skill-award/>)
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