

BUILDING CONSTRUCTION

DIVISION: Business and Applied Technology

Begin your career in the construction industry. Earn an Associate in Science degree with a Certificate of Achievement in building construction or construction inspection, while learning all phases of construction from demolition of an existing structure to grading of land to, ultimately, a turn-key situation.

Completing the degree program will qualify you to seek employment as apprentice carpenters and journey-level carpenters. Additionally, we also offer a variety of Occupational Skills Certificates to further your construction knowledge and add additional specializations to your resume.

- Construction Inspection – Associate in Science Degree, Certificate of Achievement (<https://curriculum.pasadena.edu/academic-programs/building-construction/construction-inspection-as-cert-achievement/>)

Courses

BLDG 212 PRINT READING FOR CONSTRUCTION

3 unit

Interpret working drawings in the field of building construction. Topics include: reading print specifications, materials, and symbols on construction documents; and analyzing multi-view, sectional, and isometric drawings. Total of 54 hours lecture.

Grade Mode: *Audit, Letter Grade*

BLDG 213 BUILDING CONSTRUCTION CODES AND STANDARDS

3 unit

Codes and standards enforced at the local, state, and federal levels in the building construction inspection field. Accessibility, earthquake mitigation, energy efficiency, and fire protection code and standard requirements for construction. Communication expectations of building construction codes and standards as an inspector. Total of 54 hours lecture.

Grade Mode: *Audit, Letter Grade*

BLDG 214 MATERIALS & PROCESSES OF CONSTRUCTION: SUB GRADE TO ROOF FRAMING

3 unit

Building materials and construction techniques and methods used in most residential and commercial construction. Structural plan reading, site layout, site grading, foundations, walls, and roof framing principles used by the building construction inspector. Accessibility, seismic design, energy construction, and hazardous materials in building construction examined. Total of 54 hours of lecture.

Grade Mode: *Audit, Letter Grade*

BLDG 215 MATERIALS & METHODS OF CONST: FLOOR THROUGH ROOF FRAMING

3 unit

Properties and erection of structural materials; lumber framing, structural metals, masonry and use of other materials. Insulation and glazing for energy conservation. Hardware and shear paneling for seismic reinforcement. Construction inspector's duties. Total of 54 hours lecture.

Grade Mode: *Audit, Letter Grade*

BLDG 218 INSPECTION OF ARCHITECTURAL DETAILS

3 unit

Prerequisite(s): *BLDG 212 and BLDG 213*

Properties of architectural materials, lumber, roofing, wall finishes, flooring and covering, glass and glazing, finishes. Engineering principles pertaining to heat, acoustics, humidity, roof construction, interior and exterior materials, finish carpentry, hardware and trim. Final inspection procedures. Total of 54 hours lecture.

Grade Mode: *Audit, Letter Grade*

BLDG 219 LEGAL FACTORS OF CONSTRUCTION INSPECTION

3 unit

Overview of the major elements of construction and inspection, laws, codes, and code enforcement processes. Understanding of the legal aspects of the code and the inspector's legal responsibilities, performance at hearings, and court procedures. Total of 54 hours lecture.

Grade Mode: *Letter Grade*

BLDG 220 ESTIMATING FOR BUILDING CONSTRUCTION

3 unit

Prerequisite(s): *BLDG 212 and BLDG 213*

Theory of estimating; structure of plans and specifications estimates; quantity surveying; unit cost synthesis and analysis; bid organization and preparation; competitive simulations and exercises; the estimator's qualifications, responsibilities and ethics. Total of 54 hours lecture.

Grade Mode: *Audit, Letter Grade*

BLDG 221 ELEMENTS OF GRADING INSPECTION

3 unit

Earth moving operations: Site investigations, soil analysis and soil mechanics. Plan reading; review of soils, engineer's foundation inspection reports. Foundation and steel reinforcement inspection requirements. Hillside construction and inspection requirements. Total of 54 hours lecture.

Grade Mode: *Audit, Letter Grade*

BLDG 222 SUSTAINABLE PLANNING AND ZONING PRINCIPLES

3 unit

Prerequisite(s): *BLDG 212 and BLDG 213*

Fundamental planning issues and sustainability processes as they apply to community planning and design situations. Exploration of policies, codes and standards that can be modified for the growing need for greater integration of transportation, land use, and environmental planning, with respect to changing demographic needs, public health concerns, housing affordability, equity, and livability. Total of 54 hours lecture.

Grade Mode: *Audit, Letter Grade*

BLDG 223 PRINCIPLES OF PLUMBING INSPECTION

3 unit

Prerequisite(s): *BLDG 212 and BLDG 213*

Plan reading and inspection for underground plumbing (water, gas, drains and vents); above-ground plumbing and venting; finished plumbing systems. The Uniform Plumbing Code enforcement process. Total of 54 hours lecture.

Grade Mode: *Audit, Letter Grade*

**BLDG 224 PRINCIPLES OF HEATING AND REFRIGERATION
INSPECTIONS**

3 unit

Prerequisite(s): *BLDG 212 and BLDG 213*

Plan reading and inspection of heating, air conditioning, refrigeration and ventilation systems. Ducts, conductors, fuel supply, controls, insulation and refrigeration. The Uniform Mechanical Code enforcement process. Total of 54 hours lecture.

Grade Mode: *Audit, Letter Grade*

BLDG 225 GREEN BUILDING AND ENERGY EFFICIENCIES

3 unit

Prerequisite(s): *BLDG 212 and BLDG 213*

Overview of design and construction delivery systems for high performance green buildings. Topics include: issues, challenges and opportunities associated with green building and sustainable design used in residential construction, interior design, inspection, architecture, and related fields of the building construction and design industry. Focus on understanding the general concepts of green building while examining specific building technologies as they relate to conservation. Total of 54 hours lecture.

Grade Mode: *Audit, Letter Grade*