CONSTRUCTION TECHNOLOGY

The Construction Technology department offers multiple programs that prepare students for entry-level employment and/or potential further study in the fields of construction, construction inspection, and carpentry/millwork. Students completing these degrees/certificates will have a basic foundation for construction technology and skills that include: basic construction management, knowledge of basic building codes and code authority enforcement, basic concepts of building systems, construction plan reading and development, knowledge of computer programs utilized in managing construction projects and managing quality in construction.

Career opportunities upon successful completion of these programs include construction manager assistant, materials estimator assistant, entry-level carpentry, entry-level finish installer, entry-level concrete installers, retail sales, outside sales for building materials or services, entry-level building inspector.

Contact Information
Construction Technology Faculty Contact
Brian Unruh | (559) 730-3994 | brianu@cos.edu

Industry and Technology Division Chair
Randy Emery | (559) 688-3180 | r (frankt@cos.edu) randye@cos.edu
Tulare Center Building C: Room C | Tulare Campus

Dean of CTE and Workforce Development
Jonna Schengel, Ed.D, MA, PT | (559) 688-3027 | jonnas@cos.edu
Tulare College Center | Building A 107 | Tulare Campus

Associate Degrees
- Associate of Science in Construction Inspection (AS) (https://catalog.cos.edu/areas-study/construction-technology/associate-science-construction-inspection-not-for-transfer-as/)
- Associate of Science in Construction Technology (AS) (https://catalog.cos.edu/areas-study/construction-technology/associate-science-construction-technology-not-for-transfer-as/)

Certificates
- Certificate of Achievement in Construction Inspection (https://catalog.cos.edu/areas-study/construction-technology/certificate-achievement-construction-inspection/)
- Certificate of Achievement in Construction Technology (https://catalog.cos.edu/areas-study/construction-technology/certificate-achievement-construction-technology/)
- Skill Certificate in Carpentry/Millwork (https://catalog.cos.edu/areas-study/construction-technology/skill-certificate-carpentry-millwork/)
- Skill Certificate in Construction Management (https://catalog.cos.edu/areas-study/construction-technology/skill-certificate-construction-management/)
- Skill Certificate in Construction Theory (https://catalog.cos.edu/areas-study/construction-technology/skill-certificate-construction-theory/)

For a complete list of courses and descriptions visit: COURSES (https://catalog.cos.edu/course-descriptions/)

CT 100 Construction Drawing and Design Analysis 1 4 unit(s)
Hours: 3 Lecture/Discussion Hours:
3 Lab

CT 100 is a basic drafting course which incorporates architectural drafting techniques and standards progressing from fundamentals to completion of light construction drawings, basic floor plans, elevations, details and respective building code analysis. The course utilizes computer automated drafting.
CT 101 Construction Drawing and Design Analysis 2
Hours: 3 Lecture/Discussion Hours: 3 Lab
Computer aided construction drafting including construction plan development, details for wood, concrete and structural steel and applicable codes.
Advisory on Recommended Preparation: CT 100 or equivalent college course with a minimum grade of C or equivalent skills as determined by departmental assessment.

CT 105 Computer Assisted Construction Theory
Hours: 3 Lecture/Discussion Hours: 3 Lab
A study of basic construction practices and theory including computer estimating, scheduling, and budgeting.

CT 109 Residential Codes and Inspect
Hours: 3 Lecture/Discussion
Equivalent Course: CT 272
Study of residential building codes, residential inspections and construction management practices for residential construction. Course includes construction managers' responsibilities, key inspection points for total quality management, and construction managers' relationships with local officials, general contractor, and prospective occupants.

CT 132 Basic Building System & Codes
Hours: 3 Lecture/Discussion
Basic building systems theory, including foundations, walls, roofs, mechanical, electrical, corresponding building codes and inspections. Integration of building related to the environment and human aspects of building.

CT 205 Plumbing
Hours: 3 Lecture/Discussion Hours: 1 Lab
Basic plumbing theory, materials and installation procedures, skill development for professional and non-professional plumbing students.

CT 220 Construction Practices I
Hours: 2 Lecture/Discussion Hours: 4 Lab
Hands-on construction practices on a construction site to construct specific building projects to plans and specifications and to develop or enhance building skills.

CT 221 Construction Practices 2
Hours: 2 Lecture/Discussion Hours: 4 Lab
Hands-on construction practices on a construction site to construct specific building projects to plans and specifications and develop or enhance building skills with emphasis on quality management.

CT 222 Construction practices 3
Hours: 2 Lecture/Discussion Hours: 4 Lab
Advanced hands-on construction practices on a construction site to construct specific building projects to plans and specifications and develop or enhance building skills with emphasis on controlling construction budgets.

CT 223 Construction Practices 4
Hours: 2 Lecture/Discussion Hours: 4 Lab
Hands-on construction practices on a construction site to construct specific building projects according to plans and specifications and develop or enhance building skills with emphasis on Green Building.

CT 250 Basic Carpentry and Construction Practices
Hours: 3 Lecture/Discussion Hours: 3 Lab
Introduction to construction tools, materials, measuring, millwork, and basic construction practices.

CT 260 Interior Millwork
Hours: 3 Lecture/Discussion Hours: 3 Lab
Mill cabinet functional and spatial concepts, design and construction, interior finish components and wood-shop practices.

CT 262 Cabinet and Furniture Construction
Equivalent Course: CT 162AB
This course offers concepts of cabinet design, furniture design, layout, construction, safety and millworking for building individual projects. Students will learn basic cabinet construction, and assembly of a variety of cabinet and furniture projects. In addition to cabinet construction, this course also offers a study of wood characteristics and wood joint connections. CT 262 is beneficial to students who have experience in woodworking as well as the beginner who is eager to learn more about wood working.

CT 270 Residential Wiring
Hours: 3 Lecture/Discussion
Students will learn practical applications of residential electrical systems, including branch circuits, distribution, transformers, system components, power calculations for voltage, current, wattage, and NEC application.

CT 271 Life Safety for Construction
Hours: 3 Lecture/Discussion
Study of building codes, construction practices for building occupants, and other related building officials’ safety. This course offers a study of topics in the International Residential Code which are paramount to the safety of those who dwell within. Additionally, CT 271 will also cover design criteria that involves life safety items as they pertain to residential construction.

CT 273 Electrical Codes
Hours: 3 Lecture/Discussion
Electrical code theory, plan review, math and field inspection for construction management and inspection professions.

CT 275 Plumbing Inspection
Equivalent Course: CT 175AD
Concepts of plumbing systems, code applications, fixture allocation and field inspection.
CT 277 Structural Inspection  
3 unit(s)  
Hours: 3 Lecture/Discussion  
CT 277 Structural inspection displays principles of concrete, wood, and metal used for both residential and commercial construction. In this course, students will study the International Residential Code and develop knowledge of braced wall panels, steel frame construction, and wood frame construction. Students will also learn procedures of special inspections for steel, concrete, and other structural applications.

Construction Technology

Unruh, Brian  
B.A., Briercrest Bible College, Caronport, International