

# CONSTRUCTION TRADES (CSTN)

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## **CSTN 120 - Carpentry Bscs & Rough-In Frmg. 5 Credits.**

Offered autumn. Offered at Missoula College. Introduction to the carpentry trade, including history, career opportunities, and requirements. The course covers building materials, fasteners, adhesives, hand tools, and power tools. OSHA rules and regulations for a safe working place and procedures for compliance are covered. This course includes a two-credit imbedded lab. Students will also learn how to install windows and an exterior door.

## **CSTN 122 - Beginning Carpentry Lab. 5 Credits.**

Offered at Missoula College. Lab to support CSTN 120.

## **CSTN 142 - Int & Ext Finish Carpentry. 4 Credits.**

Offered spring. Offered at Missoula College. Study of various types of siding, gutter systems, roof venting requirements, and framing with metal studs. Installation of sheathing, exterior siding, roofing felt, shingles, insulation vapor barriers, and stairs on small building constructed in CSTN 120. Installation of wood and metal doors. Demonstration of materials, layout and installation of suspended ceilings. Selection and installation of countertops, base cabinets and wall cabinets. Window, door, floor, ceiling trim and drywall are installed in a small building. This course includes a one-credit imbedded lab.

## **CSTN 143 - Intermediate Carpentry Lab. 4 Credits.**

Offered at Missoula College. Lab to accompany CSTN 142. Prereq., CSTN 120 and CSTN 122.

## **CSTN 171 - Site Prep, Found, Concrete Ins. 3 Credits.**

Offered autumn. Offered at Missoula College. Introduces the process of distance measurement as well as differential and trigonometric leveling for site layout. It covers the principles, equipment, and methods used to perform the site layout tasks that require making angular measurements. This course is designed to let students apply the blueprint reading skills learned so far to a practical exercise.

## **CSTN 191 - Special Topics. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

## **CSTN 192 - Independent Study. 1-6 Credits.**

(R-6) Offered intermittently. Offered at Missoula College. Course material appropriate to the needs and objectives of the individual student.

## **CSTN 205 - Advanced Carpentry Lecture. 6 Credits.**

Offered spring. Offered at Missoula College. Prereq., 120, 122, 142, and 143. Study of the process for angular measurement, using transits, theodolites, electronic distance measuring devices, lasers, and trigonometric calculating to lay out foundations and determine elevations. Installation of standing seam, lap seam, and built-up roofing systems; concrete, vinyl, wooden, tile, and carpeted floors as well as radiant heating; paneling, wainscoting, movable partitions, curtain walls and fire-rated commercial wall construction. Advanced stair systems, including shop built and prefabricated stairs, balustrades, mitered risers and treads, and layout of elliptical fastening methods, and assembly techniques. Project planning, scheduling, estimating, and management skills included. This course includes a two-credit lab.

## **CSTN 206 - Advanced Carpentry Lab. 2 Credits.**

Offered at Missoula College. Laboratory to accompany CSTN 205. Prereq., 120, 122, 142, and 143.

## **CSTN 261 - Building Management. 4 Credits.**

Offered autumn. Offered at Missoula College. Prereq: CSTN 120, 122, 142, 143, 171. Introduction to building business and project management including overhead costs, payroll costs, estimating and scheduling. Covers elements of payroll computation and preparation, payroll tax returns, information returns, and identification and compensation of independent contractors. Students are introduced to building cost estimating, and scheduling of subcontractors and building inspections. This course includes a one-credit imbedded lab.

## **CSTN 278 - Applied Building Practices Lab. 6 Credits.**

Offered spring. Offered at Missoula College. Prereq., 120, 122, 142, 143. Students work on a variety of projects either at the college or in the community to practice and develop their skills as well as learn new skills. Knowing and following OSHA rules and regulations is emphasized. Students are expected to produce a professional quality product.

## **CSTN 279 - Commercial Construction. 4 Credits.**

Offered autumn. Offered at Missoula College. Prereq., CSTN 120, 122, 142, 143, and 171. Study and develop skills in metal stud framing, commercial roofing systems, metal and masonry buildings, metal doors and door hardware, suspended ceilings, and fire rated commercial walls.

## **CSTN 282 - Green Bldg Concept & Design I. 4 Credits.**

Offered autumn. Offered at Missoula College. This course takes a holistic approach to natural resource conservation and energy efficiency in the construction industry. From integrated design, building site selection and evaluation, through building design, material selection and efficiencies, passive heating and cooling, and construction techniques. Students design an energy efficient residence to be built by next years class.

## **CSTN 283 - Green Bldg Concept & Design II. 3 Credits.**

Offered spring. Offered at Missoula College. Prereq., CSTN 282. A course fee of \$50.00 is required. This course builds on concepts learned in CSTN 282 Green Building Concepts and Design I. Students learn how to weatherize existing buildings and green remodeling and preservation techniques, design and build outdoor living spaces, and green landscaping practices. They learn how to document building for green rating for both NAHB Standards and LEED. They will conduct blower door tests and learn to test for and mitigate radon gas. Students will also refine the energy efficient residential plan they produced in Green Building Concepts and Design I.

## **CSTN 286 - Advanced Wood Buildings. 3 Credits.**

Offered spring. Offered at Missoula College. Curriculum will provide current and future industry participants education in the history, benefits, sourcing, design, products, applications and techniques in modern and emerging wood and wood frame construction. It will further showcase the inherent qualities of responsibly sourced wood as a rapidly renewable resource in single family residential, low rise multifamily, mixed use commercial and high rise buildings and inform both current practitioners and future industry workforce members on the products, techniques and tools in wood building construction that provide the maximum economic and sustainable benefits.

## **CSTN 291 - Special Topics. 3-6 Credits.**

(R-6) Offered at Missoula College. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

**CSTN 295 - Practicum. 1-3 Credits.**

(R-3) Offered spring. Offered at Missoula College. The course will be an elective for all students within the Sustainable Construction Technology Program and a requirement for any student pursuing a CTS in Green Building. The practicum will allow students to apply concepts learned in CSTN 282 Green Building and Design I, CSTN 283 Green Building and Design II, and CSTN 261 Building Management in a hands on project, research activity or other relevant designated undertaking.

**CSTN 299 - Capstone: Carpentry. 2 Credits.**

Offered autumn. Offered at Missoula College. Capstone laboratory to accompany CSTN 120, 122, 142, 143, 205, 206, and 261. This course provides hands-on experience in which the student applies the skills and knowledge presented in the Carpentry Program. The course will emphasize advanced application in the areas of exterior finishing and interior finishing, and other constructed topics.