

# WOODWORKING MANUFACTURING TECHNOLOGY (WMT)

## WMT 100 2.0 UNITS

### Woodworking Essentials

Class Hours: 3.0 Lecture / 3.0 Laboratory

Total Contact Hours: 54 Lecture / 54 Laboratory

This introductory course introduces students to the essential machinery, processes, and safety procedures necessary to obtain an entry-level job in the woodworking industry. Topics include shop math, basic machinery use, lumber preparation, sheet material handling, joinery, shop etiquette, and safety.

Transfer Credit: CSU

## WMT 101 3.0 UNITS

### Introduction to Woodworking

Class Hours: 2.5 Lecture / 2.0 Laboratory

Total Contact Hours: 45 Lecture / 36 Laboratory

Recommendation: Basic math skills, spatial skills, and eye/hand coordination are recommended.

This introductory woodworking course acquaints the student with the essential principles of woodworking. Topics include wood technology, use of hand tools, portable power tools, and basic machinery. Emphasis is placed on proper technique, safety, and shop policies for the woodworking facility.

Transfer Credit: CSU

## WMT 102 4.0 UNITS

### Introduction to Solid Wood Casegoods

Class Hours: 2.5 Lecture / 5.5 Laboratory

Total Contact Hours: 45 Lecture / 99 Laboratory

Prerequisite: Completion of WMT 101 with a grade of "C" or higher or "Pass."

This intermediate course increases the student's skill in the use of hand tools, portable power tools, and machinery. Topics include project planning and implementation, wood technology, and hand and machine joinery as it pertains to solid-wood, free-standing casegoods. Emphasis is placed on proper technique, safety, and shop policies for the woodworking facility. This course is not open to students who are currently enrolled in or have received credit for WMT 171B.

Transfer Credit: CSU

## WMT 102L 2.5 UNITS

### Casegood Manufacturing Lab

Class Hours: 8.0 Laboratory

Total Contact Hours: 144 Laboratory

Prerequisite: WMT 102 or equivalent with a grade of "C" or higher or "Pass".

This course allows students to refine and hone skills acquired during WMT 102. In this lab, students will design and construct a solid wood cabinet of their choice.

Transfer Credit: CSU

## WMT 103 4.0 UNITS

### Introduction to Tables

Class Hours: 2.5 Lecture / 5.5 Laboratory

Total Contact Hours: 45 Lecture / 99 Laboratory

Prerequisite: Completion of WMT 101 with a grade of "C" or higher or "Pass."

This intermediate course increases the student's skill in the use of hand tools, portable power tools and machinery. Topics include project planning and implementation, wood technology, and hand and machine joinery as it pertains to table construction. Emphasis is placed on proper technique, safety, and shop policies for the woodworking facility. This course is not open to students who are currently enrolled in or have received credit for WMT 171A.

Transfer Credit: CSU

## WMT 103L 2.5 UNITS

### Table Manufacturing Lab

Class Hours: 8.0 Laboratory

Total Contact Hours: 144 Laboratory

Prerequisite: WMT 103 or equivalent with a grade of "C" or higher or "Pass"

This course allows students to refine and hone skills acquired during WMT 103. In this lab, students will design and construct a solid wood table of their choice.

Transfer Credit: CSU

## WMT 107 3.0 UNITS

### Wood Finishing

Class Hours: 2.0 Lecture / 4.0 Laboratory

Total Contact Hours: 36 Lecture / 72 Laboratory

This course introduces the student to wood finishing for furniture makers, cabinetmakers, and general woodworkers. Topics include the chemistry and application of oil, varnish, shellac, polyurethane, lacquer, and water-base finishes. Stains, dyes, glazes, and chemicals for coloring wood are covered, along with wipe-on, brush, and spray application techniques.

Transfer Credit: CSU

## WMT 108 2.5 UNITS

### Wood Carving for Furniture

Class Hours: 2.0 Lecture / 2.0 Laboratory

Total Contact Hours: 36 Lecture / 36 Laboratory

Recommendation: Basic math skills, spatial skills, and eye/hand coordination are recommended.

This course introduces the student to the fundamentals of wood carving relative to wood furniture. Topics include chip carving, letter carving, shallow relief carving, and carving the Newport Shell. Emphasis is placed on the selection and safe use of tools, carving techniques, choice of wood, and wood finishes.

Transfer Credit: CSU

## WMT 111L 1.0 UNITS

### Introduction to Woodworking Lab

Class Hours: 3.0 Laboratory

Total Contact Hours: 54 Laboratory

Prerequisite: WMT 101 or equivalent with a grade of "C" or higher or "Pass."

This course provides the student who has completed WMT 101 the opportunity to hone and refine basic woodworking skills prior to enrolling in an intermediate course.

Transfer Credit: CSU

<p><b>WMT 117</b>  <b>Woodworking Appreciation</b>            Class Hours: 1.0 Lecture / 1.3 Laboratory            Total Contact Hours: 18 Lecture / 23.4 Laboratory</p>	1.0 UNITS	<p><b>WMT 126</b>  <b>History of Furniture Design</b>            Class Hours: 3.0 Lecture            Total Contact Hours: 54 Lecture</p>	3.0 UNITS
<p>This course analyzes and explores the culture and history of woodworking in the Los Angeles region. Critical analysis of architectural woodworking and furnishings will be studied. The course focus is on wood and wood products design, makers, historically significant buildings, and collections, both public and private.            Transfer Credit: CSU</p>		<p>Recommendation: Courses taught at the level of Introduction to College Composition with a grade of "C" or higher or "Pass" or equivalent or appropriate placement based on the college's multiple measures process with eligibility for ENGL 100 or ENGL 100S or a course at the level of college reading.            This course introduces students to the historical development of furniture from pre-history to contemporary examples from across the world. Period, regional, and major design movements are presented with lectures, videos, and readings. Emphasis is placed on the development of styles, motifs, ornamentation, manufacturing processes, and uses as they respond to cultural forces such as class, gender, sexuality, race, ethnicity, emerging economies, cultural exchange and appropriation. This course is not open to students who are enrolled in or have received credit in ART 126.            Transfer Credit: CSU</p>	
<p><b>WMT 118</b>  <b>Introduction to Woodturning</b>            Class Hours: 1.0 Lecture / 3.0 Laboratory            Total Contact Hours: 18 Lecture / 54 Laboratory</p>	2.0 UNITS	<p>This course introduces students to the historical development of furniture from pre-history to contemporary examples from across the world. Period, regional, and major design movements are presented with lectures, videos, and readings. Emphasis is placed on the development of styles, motifs, ornamentation, manufacturing processes, and uses as they respond to cultural forces such as class, gender, sexuality, race, ethnicity, emerging economies, cultural exchange and appropriation. This course is not open to students who are enrolled in or have received credit in ART 126.            Transfer Credit: CSU</p>	
<p>Recommendation: Basic math skills, spatial skills, and eye/hand coordination are recommended. This course introduces students to the methods, tools, materials, and machinery used to woodturning using the woodworking lathe. Topics include creating spindles, bowls, goblets, pens, and other turned objects.            Transfer Credit: CSU</p>		<p><b>WMT 130</b>  <b>Furniture Design</b>            Class Hours: 2.5 Lecture / 5.5 Laboratory            Total Contact Hours: 45 Lecture / 99 Laboratory</p>	
<p><b>WMT 119L</b>  <b>Introduction to Woodturning Lab</b>            Class Hours: 4.0 Laboratory            Total Contact Hours: 72 Laboratory</p>	1.0 UNITS	<p>Prerequisite: WMT 102 or WMT 103 with a grade "C" or higher or "Pass"            This course builds upon students' understanding and experience in constructing wood furniture and introduces them to the furniture design process. Topics include elements and principles of design, conceptualization, drawing, engineering, ergonomics, style, and prototyping. This course is not open to students who are currently enrolled in or have received credit for WMT 171C.            Transfer Credit: CSU</p>	
<p>Prerequisite: WMT 118 or equivalent with a grade of "C" or higher or "Pass."            This laboratory course provides students who have completed WMT 118 the opportunity to improve and refine their woodturning skills.            Transfer Credit: CSU</p>		<p><b>WMT 135</b>  <b>Windsor Chair</b>            Class Hours: 2.5 Lecture / 5.5 Laboratory            Total Contact Hours: 45 Lecture / 99 Laboratory</p>	
<p><b>WMT 123</b>  <b>Decorative Boxes</b>            Class Hours: 2.5 Lecture / 5.5 Laboratory            Total Contact Hours: 45 Lecture / 99 Laboratory</p>	4.0 UNITS	<p>Recommendation: WMT 101 or equivalent with a grade of "C" or higher or "Pass." Basic math skills, spatial skills, and eye/hand coordination are recommended.            This course introduces the student to the materials, methods, and tools used to make and manufacture a reproduction of an eighteenth century Windsor chair. Topics include layout, jig creation, steam bending, and shaping the various chair components, final assembly, and finishing of the chair. This course is not open or available to students who have received credit for WMT 235.            Transfer Credit: CSU</p>	
<p>Prerequisite: WMT 102 or WMT 103 or equivalent with a grade of "C" or higher or "Pass."            This course introduces the student to the creation of heirloom quality decorative boxes. Advanced skills and techniques will be explored in the design and production of high-quality chests or boxes. Topics include historical styles, box types, materials, and design and construction processes. Emphasis is placed on quality and safety.            Transfer Credit: CSU</p>		<p><b>WMT 135L</b>  <b>Windsor Chair Lab</b>            Class Hours: 8.0 Laboratory            Total Contact Hours: 144 Laboratory</p>	
<p>This course allows students to refine and hone skills acquired during WMT 135 Windsor Chair. In this lab, students will design and construct a Windsor chair variant.            Transfer Credit: CSU</p>		<p>This course allows students to refine and hone skills acquired during WMT 135 Windsor Chair. In this lab, students will design and construct a Windsor chair variant.            Transfer Credit: CSU</p>	

<p><b>WMT 144</b>  <b>Jigs and Fixtures</b>            Class Hours: 1.0 Lecture / 3.0 Laboratory            Total Contact Hours: 18 Lecture / 54 Laboratory</p> <p>Prerequisite: Completion of WMT 102 or WMT 103 or WMT 151 or equivalent with a grade of "C" or higher or "Pass."            This course introduces students to jigs and fixtures associated with various machinery and processes in the woodworking lab. Topics include machinery tune-up, jig and fixture design, measurement, materials, hardware, construction techniques, dust collection, and safety.            Transfer Credit: CSU</p>	<p><b>2.0 UNITS</b></p>	<p><b>WMT 155</b>  <b>Architectural Millwork</b>            Class Hours: 2.5 Lecture / 5.5 Laboratory            Total Contact Hours: 45 Lecture / 99 Laboratory</p> <p>Prerequisite: WMT 151 or WMT 153 or equivalent with a grade of "C" or higher or "Pass"            This course introduces the student to the methods, materials, tools, and machinery used in the manufacturing and installation of architectural millwork. Topics include the fabrication and installation of case, base, and crown molding; entry door installation; and the safe use of woodworking machinery and materials involved in architectural millwork and finish carpentry.            Transfer Credit: CSU</p>	<p><b>4.0 UNITS</b></p>
<p><b>WMT 151</b>  <b>Introduction to Faceframe Cabinetmaking</b>            Class Hours: 2.5 Lecture / 5.5 Laboratory            Total Contact Hours: 45 Lecture / 99 Laboratory</p> <p>Prerequisite: WMT 101 or equivalent with a grade of "C" or higher or "Pass"            Recommendation: Basic math skills, spatial skills, and eye/hand coordination are recommended.            This course introduces the student to the methods, materials, tools, and machinery used in the construction of traditional faceframe cabinetry. Classroom topics include the design, construction, fabrication, and safe use of woodworking machinery and materials involved in cabinet construction. This course is not open to students who are currently enrolled in or who have completed WMT 171B.            Transfer Credit: CSU</p>	<p><b>4.0 UNITS</b></p>	<p><b>WMT 171A</b>  <b>Introduction to Tables and Woodworking Hand Tools</b>            Class Hours: 4.0 Lecture / 8.0 Laboratory            Total Contact Hours: 72 Lecture / 144 Laboratory</p> <p>Prerequisite: WMT 101 or equivalent with a grade of "C" or higher or "Pass"            Corequisite: WMT 171L            This intensive course introduces students to the hand tools used in woodworking and the design and manufacture of a small table with a drawer. Topics include wood technology, sharpening hand tools, sawing joinery by hand, and the steps and machines used to create a small table that incorporates a dovetail drawer. This course is not open to students who have enrolled in or received credit for WMT 103 or WMT 201.            Transfer Credit: CSU</p>	<p><b>6.5 UNITS</b></p>
<p><b>WMT 153</b>  <b>Introduction to Frameless Cabinetmaking</b>            Class Hours: 2.5 Lecture / 5.5 Laboratory            Total Contact Hours: 45 Lecture / 99 Laboratory</p> <p>Prerequisite: WMT 101 or equivalent with a grade of "C" or higher or "Pass."            In this course, students learn the information and skills related to frameless cabinet manufacturing. Topics include the basics of design, sheet materials, layout of boring patterns, panel optimization, sheet material processing, and the use of hardware.            Transfer Credit: CSU</p>	<p><b>4.0 UNITS</b></p>	<p><b>WMT 171B</b>  <b>Topics in Cabinetmaking</b>            Class Hours: 4.0 Lecture / 8.0 Laboratory            Total Contact Hours: 72 Lecture / 144 Laboratory</p> <p>Prerequisite: WMT 171A, or both WMT 103 and WMT 201 with a grade of "C" or higher or "Pass"            This course introduces the student to the methods, materials, tools, and machinery used to construct cabinets. Classroom topics include the design, construction, fabrication, and safe use of woodworking machinery and materials involved in building a solid wood and face-frame cabinet. This course is not open to students who have enrolled in or received credit for WMT 102 or WMT 151.            Transfer Credit: CSU</p>	<p><b>6.5 UNITS</b></p>
<p><b>WMT 154</b>  <b>Introduction to Cabinet Installation</b>            Class Hours: 2.5 Lecture / 5.5 Laboratory            Total Contact Hours: 45 Lecture / 99 Laboratory</p> <p>Prerequisite: WMT 151 or WMT 153 or equivalent with a grade of "C" or higher or "Pass"            This course introduces the student to the methods, materials, fasteners, hardware, and tools used to install residential, commercial, and institutional cabinets. Classroom topics include reading blueprints, layout, leveling, scribing, milling, fitting, and fastening cabinets into place. A significant emphasis will be on the safe use of tools and materials involved in cabinet installation.            Transfer Credit: CSU</p>	<p><b>4.0 UNITS</b></p>	<p><b>WMT 171C</b>  <b>Woodworking Design and Fabrication</b>            Class Hours: 4.0 Lecture / 8.0 Laboratory            Total Contact Hours: 72 Lecture / 144 Laboratory</p> <p>Prerequisite: WMT 171A and WMT 171B, or all of the following: WMT 102, WMT 103, WMT 151, and WMT 201 with a grade of "C" or higher or "Pass".            This course introduces students to the process of furniture design and integrates Computer-Aided Design (CAD) software into that practice. Students will incorporate technology such as computer-controlled (CNC) routers and laser cutters into a highly effective furniture making practice. This course is not open to students who have enrolled in or received credit for WMT 130 or WMT 184.            Transfer Credit: CSU</p>	<p><b>6.5 UNITS</b></p>

<p><b>WMT 171L</b> <b>2.0 UNITS</b>  <b>Furniture Intensive Lab</b>            Class Hours: 6.0 Laboratory            Total Contact Hours: 108 Laboratory</p> <p>Corequisite: Concurrent enrollment in WMT 171A or 171B or with department approval            In this course, students will further explore woodworking techniques taught in WMT 171A and WMT 171B. Students will continue their study, design, and construction of their woodworking projects.            Transfer Credit: CSU</p>	<p><b>WMT 182L</b> <b>2.5 UNITS</b>  <b>CNC Woodworking Lab</b>            Class Hours: 8.0 Laboratory            Total Contact Hours: 144 Laboratory</p> <p>Prerequisite: WMT 182 with a grade of "C" or higher or "Pass."            This course is a project-based learning opportunity for students to practice basic skills acquired during WMT 182. In this lab, students will design and execute a furniture or cabinet object utilizing Alphacam software and the CNC router.            Transfer Credit: CSU</p>
<p><b>WMT 180</b> <b>3.0 UNITS</b>  <b>Running A Woodworking Business</b>            Class Hours: 3.0 Lecture            Total Contact Hours: 54 Lecture</p> <p>This course provides an overview of business management considerations and practices for the establishment and operation of a successful woodworking business.            Transfer Credit: CSU</p>	<p><b>WMT 183</b> <b>3.0 UNITS</b>  <b>SketchUp for Woodworkers</b>            Class Hours: 3.0 Lecture / 1.0 Laboratory            Total Contact Hours: 54 Lecture / 18 Laboratory</p> <p>Prerequisite: WMT 100 or WMT 101 or WMT 151 or equivalent with a grade of "C" or higher or "Pass."            Recommendation: Students should have basic knowledge of computers and file management.            This course introduces the student to SketchUp design software and its use in designing furniture and cabinet projects. Topics include software operations, modeling, model revision, presentation graphics, and drawing creation.            Transfer Credit: CSU</p>
<p><b>WMT 181</b> <b>3.0 UNITS</b>  <b>Introduction to Cabinet Vision</b>            Class Hours: 3.0 Lecture / 1.0 Laboratory            Total Contact Hours: 54 Lecture / 18 Laboratory</p> <p>Recommended: WMT 151 with a grade "C" or higher or "Pass" This course introduces students to Cabinet Vision, a popular cabinet design software program. Topics include utilization of Cabinet Vision to plan and design cabinets, create production drawings and cut lists, and create proposal drawings.            Transfer Credit: CSU</p>	<p><b>WMT 184</b> <b>4.0 UNITS</b>  <b>Introduction To Digital Fabrication</b>            Class Hours: 2.5 Lecture / 5.5 Laboratory            Total Contact Hours: 45 Lecture / 99 Laboratory</p> <p>Recommendation: WMT 102 or WMT 103 or WMT 151 or equivalent with a grade of "C" or higher or "Pass".            This course introduces the student to computer-aided design (CAD) software and its use in fabrication operations using computer-controlled machines. Topics include software operations and preparing files for use in machines like CNC routers, laser cutters, and 3D printers. Emphasis is placed on design, planning, safety, and integrating technology into an effective making practice. This course is not open to students who are currently enrolled in or have completed WMT 171C.            Transfer Credit: CSU</p>
<p><b>WMT 181L</b> <b>1.0 UNITS</b>  <b>Cabinet Vision Lab</b>            Class Hours: 4.0 Laboratory            Total Contact Hours: 72 Laboratory</p> <p>Prerequisite: WMT 181 with a grade of "C" or higher or "Pass"            This course allows students to deepen their understanding of Cabinet Vision, the powerful cabinet design software. Students will design a project of their own and create working drawings of their proposal for construction.            Transfer Credit: CSU</p>	<p><b>WMT 187</b> <b>1.5 UNITS</b>  <b>Woodworking Machine Maintenance and Repair</b>            Class Hours: 1.5 Lecture            Total Contact Hours: 27 Lecture</p> <p>This course introduces students to the essentials of woodworking machine maintenance and repair. Specific machines such as the jointer, planer, table saw, bandsaw, and others will be covered.            Transfer Credit: CSU</p>
<p><b>WMT 182</b> <b>4.0 UNITS</b>  <b>Alphacam and the CNC Router</b>            Class Hours: 2.5 Lecture / 5.5 Laboratory            Total Contact Hours: 45 Lecture / 99 Laboratory</p> <p>This course introduces students to Alphacam software and its use in operating the computer numerical control (CNC) router for woodworking applications. Topics include software operations, preparing tool path instructions for the machine, and operation of the CNC router. Emphasis is placed on design, planning, safety, and effective use of the technology.            Transfer Credit: CSU</p>	<p><b>WMT 201</b> <b>4.0 UNITS</b>  <b>Woodworking with Hand Tools</b>            Class Hours: 2.5 Lecture / 5.5 Laboratory            Total Contact Hours: 45 Lecture / 99 Laboratory</p> <p>This course introduces students to the hand tools used in woodworking. Topics include wood technology; sharpening chisels, hand planes, and scrapers; sawing and creating joinery; and the tuning and use of hand tools for more efficient woodworking. This course is not open to students who are currently enrolled in or have completed WMT 171A.            Transfer Credit: CSU</p>

<p><b>WMT 202</b>  <b>Advanced Furniture Casegoods</b>            Class Hours: 2.5 Lecture / 5.5 Laboratory            Total Contact Hours: 45 Lecture / 99 Laboratory</p> <p>Prerequisite: WMT 102, WMT 103, WMT 130, WMT 201 or equivalent with a grade of "C" or higher or "Pass."            This advanced course covers the design and construction of high-quality solid wood cabinets. Topics include the aesthetics of design, making scale mockups, selection of grain and color to complement the design, and advanced joinery techniques. Coopering, bent laminating, and basic veneering are also covered. Emphasis is placed on the highest degree of workmanship and design.            Transfer Credit: CSU</p>	<p><b>4.0 UNITS</b></p>	<p><b>WMT 222</b>  <b>Advanced Handtools - Joinery</b>            Class Hours: 1.0 Lecture / 3.0 Laboratory            Total Contact Hours: 18 Lecture / 54 Laboratory</p> <p>Prerequisite: Completion of WMT 201 or equivalent with a grade of "C" or higher, or "Pass" and completion of WMT 101 or WMT 151 or equivalent with a grade of "C" or higher or "Pass."            In this course, students will explore advanced topics in woodworking with handtools, specifically, joinery used in furniture construction. Topics will include laying out and creating the following joinery; mortise and tenon (blind, through, and wedged), half lap, and dovetail, among others. The use of handtools to augment machine use is emphasized.            Transfer Credit: CSU</p>	<p><b>2.0 UNITS</b></p>
<p><b>WMT 204</b>  <b>Advanced Tables</b>            Class Hours: 2.5 Lecture / 5.5 Laboratory            Total Contact Hours: 45 Lecture / 99 Laboratory</p> <p>Prerequisite: Completion of WMT 102 and WMT 103 or equivalent with grades of "C" or higher or "Pass."            This advanced course expands the student's knowledge of table design and construction to include large tables such as dining and conference tables, expanding tables, and torsion box table top construction. Topics include bent lamination, curved part joinery and angled joinery.            Transfer Credit: CSU</p>	<p><b>4.0 UNITS</b></p>	<p><b>WMT 224</b>  <b>Advanced Handtools - Dovetails</b>            Class Hours: 1.0 Lecture / 3.0 Laboratory            Total Contact Hours: 18 Lecture / 54 Laboratory</p> <p>Prerequisite: Completion of WMT 201 or equivalent with a grade of "C" or higher, or "Pass", and completion of WMT 101 or WMT 151 or equivalent with a grade of "C" or higher or "Pass."            In this course, students will explore advanced topics in woodworking with handtools, specifically, dovetails. Topics will include the laying out and creation of various types of dovetails, including through, half-blind, full-blind, houndstooth, mitered-edge, angled, and compound-angled. Tools used in creating dovetails, including saws and layout tools, will also be covered.            Transfer Credit: CSU</p>	<p><b>2.0 UNITS</b></p>
<p><b>WMT 205</b>  <b>Veneering and Marquetry</b>            Class Hours: 2.5 Lecture / 5.5 Laboratory            Total Contact Hours: 45 Lecture / 99 Laboratory</p> <p>Prerequisite: WMT 102 and WMT 103 or equivalent with a grade of "C" or higher or "Pass".            This course introduces the student to the methods, materials, tools, and machinery used to create decorative veneer panels, parquetry, marquetry, and inlay. Topics include veneer selection, pattern matching and layout, substrate selection, and clamping methods used to lay-up veneer on various types and shapes of substrates.            Transfer Credit: CSU</p>	<p><b>4.0 UNITS</b></p>	<p><b>WMT 228L</b>  <b>Project Completion Lab</b>            Class Hours: 4.0 Laboratory            Total Contact Hours: 72 Laboratory</p> <p>Prerequisite: WMT 102 or WMT 103 or WMT 151 equivalent with a grade of "C" or higher or "Pass."            This course provides students with the necessary time and facility to continue working a project to completion. Instruction is project specific with emphasis on problem solving and detail.            Transfer Credit: CSU</p>	<p><b>1.0 UNITS</b></p>
<p><b>WMT 221</b>  <b>Advanced Handtools-Handplanes</b>            Class Hours: 1.0 Lecture / 3.0 Laboratory            Total Contact Hours: 18 Lecture / 54 Laboratory</p> <p>Prerequisite: Completion of WMT 201 and WMT 101 or equivalent with a grade of "C" or higher or "Pass," or WMT 151 or equivalent with a grade of "C" or higher or "Pass."            In this course, students will explore advanced topics in woodworking with handtools, specifically, handplanes. Topics will include the use of handplanes in creating furniture projects, making wooden handplanes, tuning and using metal and wood handplanes, and building and using tools and fixtures related to handplanes.            Transfer Credit: CSU</p>	<p><b>2.0 UNITS</b></p>	<p><b>WMT 229L</b>  <b>Comprehensive Woodworking Manufacturing Specialty Lab</b>            Class Hours: 8.0 Laboratory            Total Contact Hours: 144 Laboratory</p> <p>Prerequisite: WMT 102 or WMT 103 or WMT 151 or equivalent with a grade of "C" or higher or "Pass."            This course allows students to refine and hone skills acquired during previous comprehensive woodworking courses. In this lab, students will design and construct a project of their choice that is relevant to the subject matter being taught.            Transfer Credit: CSU</p>	<p><b>2.5 UNITS</b></p>

<p><b>WMT 231</b> <span style="float: right;"><b>4.0 UNITS</b></span>  <b>Outdoor Seating</b>            Class Hours: 2.5 Lecture / 5.5 Laboratory            Total Contact Hours: 45 Lecture / 99 Laboratory</p> <p>Prerequisite: WMT 102 and WMT 103 or equivalent with a grade of "C" or higher or "Pass."            This course for the advanced student covers the history, design, construction and production of outdoor seating pieces. The student will design and build a solid-wood, exposed-frame chair or bench.            Transfer Credit: CSU</p>	<p><b>WMT 237L</b> <span style="float: right;"><b>2.5 UNITS</b></span>  <b>Traditional Furniture Lab</b>            Class Hours: 8.0 Laboratory            Total Contact Hours: 144 Laboratory</p> <p>Prerequisite: WMT 237 with a grade of "C" or higher or "Pass"            In this course, students will explore traditional furniture-building techniques other than those taught in WMT 237. Students will study, design, and build a piece of traditional furniture, in the form and style of their choice.            Transfer Credit: CSU</p>
<p><b>WMT 232</b> <span style="float: right;"><b>4.0 UNITS</b></span>  <b>Chair Design and Construction</b>            Class Hours: 2.5 Lecture / 5.5 Laboratory            Total Contact Hours: 45 Lecture / 99 Laboratory</p> <p>Prerequisite: WMT 231 or equivalent with a grade of "C" or higher or "Pass."            This course for the advanced student covers the history, design, construction and production of seating pieces. The student will design and build a solid wood or exposed frame chair with angled joinery.            Transfer Credit: CSU</p>	<p><b>WMT 245</b> <span style="float: right;"><b>4.0 UNITS</b></span>  <b>Curved and Tapered Forms for Furniture</b>            Class Hours: 2.5 Lecture / 5.5 Laboratory            Total Contact Hours: 45 Lecture / 99 Laboratory</p> <p>Prerequisite: WMT 102 and WMT 103 or equivalent with a grade of "C" or higher or "Pass."            This course introduces the student to a variety of advanced techniques for creating curved and tapered forms appropriate for furniture construction.            Transfer Credit: CSU</p>
<p><b>WMT 233</b> <span style="float: right;"><b>4.0 UNITS</b></span>  <b>Morris Chair</b>            Class Hours: 2.5 Lecture / 5.5 Laboratory            Total Contact Hours: 45 Lecture / 99 Laboratory</p> <p>Prerequisite: WMT 102 and WMT 103 or equivalent with a grade of "C" or higher or "Pass."            This course for the advanced student covers the first recliner, the historical Morris Chair. Hand tools, hand power tools, and machinery are used in an advanced setting. Topics include planning, design, joinery, bent lamination, complex assembly procedures, upholstery, and finishing.            Transfer Credit: CSU</p>	<p><b>WMT 246</b> <span style="float: right;"><b>4.0 UNITS</b></span>  <b>Sculptural Chair</b>            Class Hours: 2.5 Lecture / 5.5 Laboratory            Total Contact Hours: 45 Lecture / 99 Laboratory</p> <p>Prerequisite: WMT 231 or WMT 232 or equivalent with a grade of "C" or higher or "Pass."            This advanced furniture making course introduces the student to the methods, materials, tools, and machinery used to fabricate a sculpted wood chair.            Transfer Credit: CSU</p>
<p><b>WMT 237</b> <span style="float: right;"><b>4.0 UNITS</b></span>  <b>Traditional American Furniture</b>            Class Hours: 2.5 Lecture / 5.5 Laboratory            Total Contact Hours: 45 Lecture / 99 Laboratory</p> <p>Prerequisite: WMT 103            Recommendation: WMT 102, WMT 118, and WMT 201.            This course is designed to increase the students' knowledge in the use of machine woodworking and woodworking hand tools and expand their understanding of wood technology. This advanced course will reinforce skills learned in previous courses and challenge the student to demonstrate the ability to plan, design, fabricate, reproduce, and finish a piece of traditional furniture. Students will construct woodworking projects that are relevant to the subject matter being taught during the same period of time. Topics include traditional American furniture (19th century and earlier) including: chairs, beds, and caseworks. Emphasis is placed on machine and hand tool skills and safety.            Transfer Credit: CSU</p>	<p><b>WMT 249L</b> <span style="float: right;"><b>2.5 UNITS</b></span>  <b>Furniture Manufacturing Specialty</b>            Class Hours: 8.0 Laboratory            Total Contact Hours: 144 Laboratory</p> <p>Prerequisite: WMT 102 or WMT 103 or equivalent with a grade of Credit or "C" or higher.            This course allows students to perfect and hone skills acquired during previous furniture courses. In this lab, students will design and construct woodworking projects that are relevant to the subject matter being taught during the same time period.            Transfer Credit: CSU</p> <p><b>WMT 251</b> <span style="float: right;"><b>4.0 UNITS</b></span>  <b>Intermediate Cabinetmaking</b>            Class Hours: 2.5 Lecture / 5.5 Laboratory            Total Contact Hours: 45 Lecture / 99 Laboratory</p> <p>Prerequisite: WMT 151 or WMT 153 or equivalent with a grade of "C" or higher or "Pass"            Recommended: WMT 154 or WMT 155 This course allows the student to improve cabinetmaking skills by using tools and machinery specific to advanced cabinetmaking and millwork. Topics include upper and lower cabinet construction, multiple cabinet systems, and installation of frameless or face frame cabinetry. Emphasis is placed on production techniques and the safe use of woodworking machinery and materials in the industry. This course is not open to students who have received credit for WMT 250 or WMT 252.            Transfer Credit: CSU</p>

<p><b>WMT 269L</b>  <b>Cabinetmaking Manufacturing Specialty Lab</b>            Class Hours: 8.0 Laboratory            Total Contact Hours: 144 Laboratory</p> <p>Prerequisite: WMT 151 or equivalent with a grade of "C" or higher or "Pass."            This course allows students to refine and hone skills acquired during previous cabinetmaking courses. In this lab, students design and construct a cabinet project(s) that is relevant to the subject matter being taught during the same time period.            Transfer Credit: CSU</p>	<p><b>2.5 UNITS</b></p>	<p><b>WMT 292</b>  <b>Production-Special Projects</b>            Class Hours: 2.5 Lecture / 5.5 Laboratory            Total Contact Hours: 45 Lecture / 99 Laboratory</p> <p>Prerequisite: WMT 151 and one of the following: WMT 102, WMT 103, WMT 153, WMT 155, WMT 181, or WMT 250 or equivalent with a grade of "C" or higher or "Pass" or appropriate work experience.            This course enables students to work as a team in the design, manufacturing, and installation of a project or projects for on-campus use, other than wall-mounted cabinets. This course includes instruction in design, production techniques, materials science, cost estimating, time management, and scheduling. This course specializes in the fabrication and installation of furniture items, freestanding cabinets, or other items.            Transfer Credit: CSU</p>	<p><b>4.0 UNITS</b></p>
<p><b>WMT 282</b>  <b>Intermediate Alphacam and the CNC Router</b>            Class Hours: 2.5 Lecture / 5.5 Laboratory            Total Contact Hours: 45 Lecture / 99 Laboratory</p> <p>Prerequisite: WMT 182 with a grade of "C" or higher or "Pass."            In this course, the student will review and learn intermediate functions of Alphacam software and additional methods for operating the computer numeric control (CNC) router in woodworking applications. Topics include software operations, 3D surface machining, CNC Router setup, advanced tooling, and operation of the CNC router. Emphasis is placed on design planning, safety, and efficiency.            Transfer Credit: CSU</p>	<p><b>4.0 UNITS</b></p>		
<p><b>WMT 282L</b>  <b>Intermediate CNC Woodworking Lab</b>            Class Hours: 8.0 Laboratory            Total Contact Hours: 144 Laboratory</p> <p>Prerequisite: WMT 282 with a grade of "C" or higher or "Pass."            This course allows student to perfect and hone intermediate level skills acquired during WMT 282. In this lab, students will design and execute a furniture or cabinet object utilizing Alphacam software and the CNC router.            Transfer Credit: CSU</p>	<p><b>2.5 UNITS</b></p>		
<p><b>WMT 291</b>  <b>Production Cabinetmaking</b>            Class Hours: 2.5 Lecture / 5.5 Laboratory            Total Contact Hours: 45 Lecture / 99 Laboratory</p> <p>Prerequisite: WMT 151 and one of the following: WMT 102, WMT 103, WMT 153, WMT 155, WMT 181, or WMT 250 or equivalent with a grade of "C" or higher or "Pass" or appropriate work experience.            This course enables students to work as a team in the design, manufacturing, and installation of wall-mounted cabinets and fixtures for on-campus use. This course includes instruction in cabinet design, production techniques, materials science, cost estimating, time management, and scheduling. This course specializes in the fabrication and installation of cabinetry and fixtures in the category of institutional or commercial production.            Transfer Credit: CSU</p>	<p><b>4.0 UNITS</b></p>		