

# Cabinetmaking and Millwork

Program Number: 31-409-2

## One-Year Technical Diploma

Construction Program Cluster

Center for Construction, Manufacturing, Apprenticeship & Transportation

Courses offered at Madison Campuses

For information call: (608) 246-6102 or  
(800) 322-6282 Ext. 6102

## About the Program

The Cabinetmaking and Millwork program provides the student with the knowledge and skills necessary to plan and complete cabinetry, furniture and millwork projects. Students learn to work with prints, specifications and shop drawings. Emphasis is placed on selecting proper materials, determining the best procedures, manufacturing parts to specification and assembling and finishing individual projects.

In our well-equipped shop, students learn the fundamentals of working with wood, from planning a project to adding the finishing details. From traditional woodworking equipment and hand tools to the latest computer numerically controlled (CNC) machinery and software, students learn to plan and process wood in the most efficient manner.

Through partnerships with area businesses and local and state agencies, students gain practical experience on a variety of larger scale projects. Students work in teams to plan, estimate and execute these projects. Profits are used to fund scholarship opportunities for students in the program.

## Curriculum

		Hrs/week	
		Credits	Lec-Lab
<b>First Semester</b>			
31-409-330	Woodworking 1: Machinery & Methods .....	5	4-16
31-409-331	Woodworking 2: Materials & Processes .....	5	4-16
31-409-340	Tool & Machine Maintenance .....	1	1-3
31-409-341	Wood Finishing 1 .....	1	1-3
31-409-385	Construction Drawing.....	2	1-3
31-801-356	Communications 1 .....	1	2-0
31-804-379	Vocational Mathematics 1 .....	1	2-0
<b>Semester Total</b>		<b>16</b>	

<b>Second Semester</b>			
31-409-332	Cabinetmaking, Millwork & Furniture 1 .....	5	4-16
31-409-333	Cabinetmaking, Millwork & Furniture 2 .....	5	4-16
31-409-337	Workplace Safety * .....	1	4-0
31-409-342	Countertops & Surfaces.....	2	1-3
31-409-345	Wood Finishing 2* .....	1	0-4
31-409-386	AutoCAD for Cabinet Drawing .....	2	2-2
<b>Semester Total</b>		<b>16</b>	

\*Meets for 9 weeks.

### Notes:

- Safety procedures are required in all labs.
- Prerequisites can be waived with center approval.
- Advanced standing may be gained through the center dean.
- Certain associate degree or higher post secondary courses specific to the curriculum may substitute for courses upon approval of the dean.

*Note: Students are placed in English or mathematics courses based on their scores on the COMPASS or ASSET test or on completion of the appropriate prerequisite/s.*

## Program Courses

**31-409-330 Woodworking 1: Machinery & Methods** 5 credits

Introduces the learner to the operation of traditional woodworking equipment. Students perform numerous exercises to gain familiarity with portable power tools and industrial woodworking machinery while building their skills and familiarity with wood. Units include layout, sawing, surfacing, boring, sanding and assembly.

**31-409-331 Woodworking 2: Materials and Processes** 5 credits

Building on skills acquired in Woodworking 1, students incorporate an understanding of wood as a material to properly execute joinery and cabinetry projects. Instruction includes units in shaping, adhesives, joinery and face-frame cabinetry. Prerequisite: Woodworking 1: Machinery & Methods, 31-409-330.

**31-409-332 Cabinetmaking, Millwork & Furniture 1** 5 credits

Planning and execution of cabinet, millwork and furniture projects are explored in this class. Standards for kitchen cabinetry and design are applied as students work together in teams on a group project. Additional areas of study include: jigs & fixtures, 32mm cabinetmaking and leg & rail furniture. Prerequisite: Woodworking 1, 31-409-330, and Woodworking 2, 31-409-331, or instructor consent.

**31-409-333 Cabinetmaking, Millwork & Furniture 2** 5 credits

Preparation for employment is emphasized in the final quarter of this program as students propose and execute projects of their choice. Students have the opportunity to experience a real work environment while completing an internship with an area employer. Areas of exploration include veneering, CNC technology and curved and circular work. Prerequisite: Cabinetmaking, Millwork & Furniture 1, 31-409-332.

**31-409-337 Workplace Safety** 1 credit

A safe working environment is not only essential, it is the law. This course covers several key areas of OSHA workplace safety, including: proper procedures for locking out and tagging equipment to be serviced, HASCOM (Hazardous Materials Communication), PPE (Personal Protective Equipment) and proper machine guarding.

**31-409-340 Tool & Machine Maintenance** 1 credit

Proper maintenance is essential in order to obtain accurate and repeatable results. This course focuses on keeping machinery in proper working order and maintaining sharp cutting tools. Students learn to troubleshoot problems and to establish routine maintenance procedures. Corequisite: Wood Finishing 1, 31-409-341.

**31-409-341 Wood Finishing 1** 1 credit

Finishing is both an art and a science. This course demystifies the process of finishing wood and explores the materials used. Hand applied, brushed and sprayed finishes will be covered. Proper finish selection and safe use of finishes is emphasized. Corequisite: Tool & Machine Maintenance, 31-409-340.

**31-409-342 Countertops and Surfaces** 2 credits

Introduces the student to the field of countertop fabrication. Plastic laminates are emphasized. Students learn about selecting proper grades and textures of plastic laminate, types of adhesives, and methods of application to secure laminate. Students also have the opportunity to experience Solid Surface (Corian) application techniques while producing their own countertop sample.

**31-409-345 Wood Finishing 2** 1 credit

Finishing is both an art and a science. This course demystifies the process of finishing wood and explores the materials used. Hand applied, brushed and sprayed finishes will be covered. Proper finish selection and safe use of finishes is emphasized. Prerequisite: Wood Finishing 1, 31-409-341.

**31-409-385 Construction Drawing** 2 credits

Drawing is essential for quickly and accurately communicating three-dimensional ideas. This class will introduce the learner to drawing and estimating as they relate to woodworking occupations. Areas of instruction include sketching techniques, orthographic and isometric projection, drafting, estimating materials and costs, and an introduction into computer-aided drafting (CAD).

**31-409-386 AutoCAD for Cabinet Drawing** 2 credits

Expanding on concepts introduced in Drawing and Estimating, this course builds competence in using CAD as a tool to communicate. Kitchen planning and cabinet design are emphasized. Students learn to develop working drawings and details for cabinet, millwork and furniture projects. Prerequisite: Drawing and Estimating, 31-409-385.

## Career Potential:

- Cabinetmaker
- Finish Carpenter
- Architectural Woodworker
- Finishing Specialist
- Fixtures Manufacturer
- CAD/CAM Operator

With additional education and/or work experience, graduates may find employment as:

- Master Carpenter
- Shop Supervisor
- Journey-Level Finish Carpenter

*More detailed and updated information on this program may be available at: [matcmadison.edu](http://matcmadison.edu). The college reserves the right to make changes in the regulations and courses announced in this publication without notice.*

*Madison Area Technical College provides equal opportunity in education and employment.*

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