

Campus:

Rice Lake



Program Overview

The Wood Technics program will provide students with the knowledge and skills necessary for job success in the construction industry. Students will learn the fundamentals of building design, energy efficiency concepts, construction, layout operation, related mathematics, print reading, estimating, cabinet design, and materials of industry. Students will use the hand and power tools that are commonly used in construction and fabrication to assemble wood products and to build a house.

Special Feature

This is a unique two-year program in the state that combines cabinetry and residential construction.

Second-year students build a custom home as a capstone project.

Admission Requirements

Students in this program must:

- Complete application form and submit with fee (fee waiver may apply if previously submitted)
- Complete Accuplacer entrance assessment to determine placement (waiver may apply with acceptable alternative test scores and/or postsecondary degree completion)
- Complete admissions interview with a WITC counselor (above requirements should be completed prior to interview)

Student Profile

Wood Technics students should be able to:

- Move arms, hands, and fingers rapidly and accurately
- Visualize forms and shapes from sketches
- Organize work
- Stand for long periods of time
- Lift 50 pounds
- See variations in wood color
- Work with wood dust
- Perform basic arithmetic and measuring
- Work well with others
- Work carefully and safely
- Enjoy working with machinery
- Assume responsibility for their work

Preparation for Admission

Students should strive to reach a comfort level in the following courses or skills:

- Machine Shop Practices
- Woodworking
- Cabinetmaking
- Wood Turning and Pattern Making
- Basic Math
- Print Reading
- Architectural Drawing

Program Outcomes

Employers will expect Wood Technics graduates to be able to:

- Read and interpret construction prints
- Follow standard safety procedures while operating and maintaining woodworking machines
- Interpret building codes
- Design residential plans and manufacture related projects using CNC/CAD and traditional formats
- Estimate building material costs from plans
- Survey building sites
- Construct light frame structures while demonstrating safe work practices
- Use critical-thinking skills to solve construction and manufacture-related problems
- Demonstrate applications of woodworking and joinery

Collegewide outcomes and indicators will also be addressed to develop personal awareness, career effectiveness, and professionalism. See page 5 for a list of collegewide outcomes and indicators.

Career Outlook

Typical positions available after graduation include:

- Carpenter (Construction)
- Woodworking Machine Operator
- Furniture Finisher
- Millperson
- Machine Setup Person
- Cabinetmaker
- Wood Machinist
- Salesperson
- Estimator
- Draftsperson
- Material Handling Specialist

Curriculum

Number	Course Title	Credits
Occupational Specific Courses		
32410300	Cabinet and Furniture Making 1	5
32410302	Cabinet and Furniture Making 2 ▲	5
32410303	Construction Framing 1 ▲	4
32410304	Advanced Construction Framing (WBL) ▲	5
32410315	Construction Framing 2 ▲	3
32410320	CNC Machine Operation ▲	2
32410326	Site Surveying ▲	1
32410329	Building Materials Estimating ▲	3
32410332	Drafting for Carpentry 1 ▲	5
32410333	Drafting for Carpentry 2 ▲	5
32410334	Production Cabinetmaking 1 ▲	5
32410335	Production Cabinetmaking 2 ▲	5
32410339	Print Reading for Building Construction	<u>2</u>
		50
Occupational Supportive/General Studies Courses †		
32801361	Applied Communications 1	2
32801363	Applied Communications 2 ▲	2
32804355	Math 355	3
32804365	Math 365 ▲	3
32809371	Applied Human Relations	2
32890300	Contemporary Workplace	<u>2</u>
		14
PROGRAM REQUIREMENTS		64

▲ Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

† See page 40 for General Studies course descriptions.

Course Descriptions

(See page 40 for General Studies course descriptions)

32410300

Cabinet and Furniture Making 1 - Credits: 5

This is a lab/shop/theory application. This course covers the basics of cabinet and furniture construction. Fundamental machine operations and safety rules are taught. The students are required to construct, by approved machine methods, the common joints used in good construction. The study of wood and other materials, hand tools and bench work, shop drawing, design, and layout are a part of the basic course.

32410302

Cabinet and Furniture Making 2 - Credits: 5

This is a lab/shop applications course. The student will be involved in projects according to his/her abilities to provide practical application of the operations learned. COREQUISITE: 32410300 Cabinet and Furniture Making 1.

32410303

Construction Framing 1 - Credits: 4

This is a lab/shop applications course that runs concurrently with and companion to Construction Framing 2. This course covers the operations required in building layout, installation of concrete and masonry, and the framing of floors and walls to meet Wisconsin State Code. Competencies are learned through actual hands-on applications. PREREQUISITES: 32410302 Cabinet and Furniture Making 2, 32410339 Print Reading for Building Construction, and 32804355 Math 355.

32410304

Advanced Construction Framing (WBL) - Credits: 5

This is a lab/shop/theory application. This course provides instruction in current application techniques of various building materials as applied to construction work on residential/light commercial buildings. The course of study encompasses the procedures of appropriate safe skills and knowledge required to construct/install rafters, roofing, materials, siding, insulations, stairs, platforms, decks, floor coverings, wall coverings, and related materials. PREREQUISITE: 32410315 Construction Framing 2.

32410315

Construction Framing 2 - Credits: 3

This is a lab/theory course that runs concurrently with and companion to Construction Framing 1. This course covers the operations required in building layout and the framing of floors, walls, roofs, and stairs. The learner will learn the importance of building an energy-efficient home, and will be performing energy tests with diagnostic tools. Competencies are learned through lecture and actual hands-on applications. PREREQUISITES: 32410339 Print Reading for Building Construction, 32804355 Math 355, and COREQUISITE: 32410303 Construction Framing 1.

32410320

CNC Machine Operation - Credits: 2

This course introduces the student to the development and editing of CNC programs. The basic elements of CNC machine setup and operation are covered for the production of acceptable parts. Safety concerns are also addressed. PREREQUISITE: 32804365 Math 365.

32410326

Site Surveying - Credits: 1

This course is designed to provide the student with the understanding of site plans, the recontouring of sites, the use of builder's surveying equipment, and other related information. PREREQUISITES: 32410339 Print Reading for Building Construction and 32804355 Math 355.

32410329

Building Materials Estimating - Credits: 3

This course introduces the student to the basic methods of estimating and develops a system for doing quantity surveys. The course also prepares the student to make some of the kinds of estimates that are commonly used in architecture and building construction. PREREQUISITES: 32410333 Drafting for Carpentry 2 and 32804355 Math 355 or equivalent.

32410332

Drafting for Carpentry 1 - Credits: 5

This course introduces students to the subject of residential design and construction. The problems faced by builders and designers before actual construction begins are emphasized. Students complete a series of detail drawings to acquaint them with the materials used and the methods of fabrication in sketching, lettering, line weights, and use of the scale are stressed. Standard house plans are utilized to acquaint the student with the drawings used in home construction. Students are also introduced to state, federal, and local codes. PREREQUISITE: 32410339 Print Reading for Building Construction.

32410333

Drafting for Carpentry 2 - Credits: 5

This course introduces SoftPlan software and the use of the Uniform Dwelling Code Book. In this course the students design residential structures based on the needs of individuals. The needs and desires of the client and their family are stressed in assignments. Various types of residential structures are designed. The student is introduced to the use of models and perspective drawings in selling a design to a client. UDC regulations are stressed throughout the drawings. PREREQUISITE: 32410332 Drafting for Carpentry 1.

32410334

Production Cabinetmaking 1 - Credits: 5

This is a lab/shop/theory application that deals with finishing and fine tolerances of the construction trade. Hands-on techniques of hanging and trimming doors and windows, installing trim and molding, hanging drywall, and other wall finishes are covered. PREREQUISITE: 32410302 Cabinet and Furniture Making 2.

32410335

Production Cabinetmaking 2 - Credits: 5

This is a lab/shop/theory application that deals with finishing and fine tolerances of the construction trade. Hands-on techniques of installing trim and molding, and designing and building cabinets are covered. PREREQUISITE: 32410302 Cabinet and Furniture Making 2.

32410339

Print Reading for Building Construction - Credits: 2

This course provides instruction in reading and interpreting shop drawings, residential drawings, and commercial building plans. Emphasis is placed on building terminology and learning conventional techniques of communicating building methods from the designer to the builder. Students learn to visualize the structure and to interpret elevations, plan views, details, and sections from drawings. They also learn to read and interpret building specifications.

Gainful employment information is available at this link: <http://www.witc.edu/pgmpages/woodtechnics/career.htm>. This information is provided as a federal requirement in an effort to help students make informed decisions related to the costs and potential employment in a chosen field.

Graduate Employment Information

(WITC Graduate Survey Responses 2009-2010; for most recent data, go to [witc.edu](http://www.witc.edu))

Number of graduates	12	Number employed	9	% employed in WITC district	88%
Number of responses	10	Percent employed	100%	Range of yearly salary	\$19,200-\$55,986
Number available for employment	9	Employed in related field	8	Average yearly salary	\$33,351

career vision