

Area of Interest: Construction and Skilled Trades

Cabinetmaking and Furniture Technician

Ontario College Diploma

Program Code: 0575X04FWO

42 Weeks

Ottawa Campus

Our Program

Learn in state-of-the-art facilities.

The two-year Cabinetmaking and Furniture Technician Ontario College Diploma program at Algonquin College prepares you with the skills and techniques necessary to get started in the industry.

This program, compressed into a 42-week format, is a highly-intensive but rewarding journey for those seeking a hands-on career in the cabinetmaking and woodworking industry. All classes take place at the Algonquin Centre for Construction Excellence, where students use modern industry-standard equipment and tools. You learn both traditional joinery and advanced technology used in the industry today.

Learn both practical application and theoretical approaches, with classes ranging from the History of Architecture to Wood Technology.

Upon successful completion of this program, graduates may find careers in many sectors of the cabinetmaking and woodworking industry, including:

- furniture and cabinetmaking
- furniture refinishing and restoration
- kitchen and commercial cabinetry
- boat building and refitting

You may also seek employment as a furniture, tools and/or hardware salesperson, or pursue self-employment opportunities. You may also consider an apprenticeship.

SUCCESS FACTORS

This program is well-suited for students who:

- Enjoy a hands-on approach to learning about the cabinetmaking and furniture industry.
- Are attentive to detail.
- Can work independently.
- Have good hand-eye coordination and manual dexterity.

Employment

Graduates may find employment in furniture making and cabinetmaking, furniture repair refinishing and restoration, kitchen and commercial cabinetry, as well as boatbuilding and refitting. Other career options may include job estimating, sales of furniture, tools, hardware and machinery. Graduates are also well equipped for future self-employment.

Learning Outcomes

The graduate has reliably demonstrated the ability to:

- Solve trade related problems using basic mathematics.
- Use appropriate trade terminology in communications with colleagues, supervisors and clients.
- Explain the relationship between industry, style and history on furniture.
- Apply surface preparation, stains and finishes to specification.
- Examine the nature and manufacture of materials common to the trade and the relationship to industry.
- Apply the basic concepts and principles of marketing, management and financial control to the operation of a small business.
- Construct advanced furniture and cabinetry projects according to specifications, plans and cutting lists.
- Select, maintain and use tools of the trade and standard woodworking machinery.
- Use computer software to design projects, determine cutting procedures, and to calculate material requirements and costing.
- Perform all work in compliance with relevant legislations, regulations and health and safety procedures.
- Develop and use joinery and layout techniques to design and construct projects.
- Identify and apply discipline-specific practices that contribute to the local and global community through social responsibility, economic commitment and environmental stewardship.

Program of Study

Level: 01	Courses	Hours
DRA1410	Drafting for Cabinetmakers	28.0
ENL1813T	Communications I	42.0
GED2012	Achieving Success in the 21st Century	42.0
WOO1410	Wood Technology	42.0
WOO8930	Joinery	168.0
WOO8938	Hand Tools and Machine Basics	56.0
Level: 02	Courses	Hours
CAM1420	CNC/Drafting and Plan Reading I	42.0
WOO1421	Basic Furniture Finishing	42.0
WOO1422	Furniture History and Cabinet Construction	56.0
WOO8939	Furniture Making	168.0
WOO8940	Advanced Machining	56.0
Choose one from equivalencies: Courses		Hours
GED0575	General Education Elective	42.0

Level: 03	Courses	Hours
BUS1430	Applied Business Practices	42.0
CAM1431	CNC/Drafting and Plan Reading II	28.0
ENL2003	Communications II for Technicians	42.0
WOO0004	Furniture, Kitchens and Millwork	168.0
WOO1430	Commercial Cabinetry Theory	28.0
WOO8910	Furniture Finishing and Touch-Up	56.0
Choose one from equivalencies: Courses		Hours
GED0575	General Education Elective	42.0

Fees for the 2023/2024 Academic Year

Tuition and related ancillary fees for this program can be viewed by using the Tuition and Fees Estimator tool at <https://www.algonquincollege.com/fee-estimator>.

Further information on fees can be found by visiting the Registrar's Office website at <https://www.algonquincollege.com/ro>.

Fees are subject to change.

Additional program related expenses include:

- Books and supplies can be purchased at the campus store. Expenses total approximately \$450 for the program duration.
- Students are responsible for parking and locker fees, if applicable.
- All students are responsible for supplying and using their own personal protective equipment (such as CSA-approved safety footwear, non-tinted protective eyewear, hearing protection) as required in each lab environment.

Admission Requirements for the 2024/2025 Academic Year

College Eligibility

- Ontario Secondary School Diploma (OSSD) or equivalent. Applicants with an OSSD showing senior English and/or Mathematics courses at the Basic Level, or with Workplace or Open courses, will be tested to determine their eligibility for admission; OR
- Academic and Career Entrance (ACE) certificate; OR
- General Educational Development (GED) certificate; OR
- Mature Student status (19 years of age or older and without a high school diploma at the start of the program). Eligibility may be determined by academic achievement testing for which a fee of \$50 (subject to change) will be charged.

Program Eligibility

- English, Grade 12 (ENG4C or equivalent)
- Mathematics, Grade 12 (MAP4C or equivalent)
- Applicants with international transcripts must provide proof of the subject-specific requirements noted above and may be required to provide proof of language proficiency.

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- IELTS-International English Language Testing Service (Academic) Overall band of 6.0 with a minimum of 5.5 in each band; OR TOEFL-Internet-based (iBT) Overall 80, with a minimum of 20 in each component: Reading 20; Listening 20; Speaking 20; Writing 20; OR Duolingo English Test (DET) Overall 110, minimum of 110 in Literacy and no score below 95.

Not sure if you meet all of the requirements? Academic Upgrading may be able to help with that: <https://www.algonquincollege.com/access/> .

Should the number of qualified applicants exceed the number of available places, applicants will be selected on the basis of their proficiency in English and mathematics.

Admission Requirements for 2023/2024 Academic Year

College Eligibility

- Ontario Secondary School Diploma (OSSD) or equivalent. Applicants with an OSSD showing senior English and/or Mathematics courses at the Basic Level, or with Workplace or Open courses, will be tested to determine their eligibility for admission; OR
- Academic and Career Entrance (ACE) certificate; OR
- General Educational Development (GED) certificate; OR
- Mature Student status (19 years of age or older and without a high school diploma at the start of the program). Eligibility may be determined by academic achievement testing for which a fee of \$50 (subject to change) will be charged.

Program Eligibility

- English, Grade 12 (ENG4C or equivalent).
- Mathematics, Grade 12 (MAP4C or equivalent) is recommended.
- Applicants with international transcripts must provide proof of the subject-specific requirements noted above and may be required to provide proof of language proficiency. Domestic applicants with international transcripts must be evaluated through the International Credential Assessment Service of Canada (ICAS) or World Education Services (WES).
- IELTS-International English Language Testing Service (Academic) Overall band of 6.0 with a minimum of 5.5 in each band; OR TOEFL-Internet-based (iBT) Overall 80, with a minimum of 20 in each component: Reading 20; Listening 20; Speaking 20; Writing 20.

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Application Information

CABINETMAKING AND FURNITURE TECHNICIAN Program Code 0575X04FWO

Applications to full-time day programs must be submitted with official transcripts showing completion of the academic admission requirements through:

ontariocolleges.ca
60 Corporate Court
Guelph, Ontario N1G 5J3
1-888-892-2228

Students currently enrolled in an Ontario secondary school should notify their Guidance Office

prior to their online application at <http://www.ontariocolleges.ca/> .

Applications for Fall Term and Winter Term admission received by February 1 will be given equal consideration. Applications received after February 1 will be processed on a first-come, first-served basis as long as places are available.

International applicants please visit this link for application process information:
<https://algonquincollege.force.com/myACint/> .

For further information on the admissions process, contact:

Registrar`s Office
Algonquin College
1385 Woodroffe Ave
Ottawa, ON K2G 1V8
Telephone: 613-727-0002
Toll-free: 1-800-565-4723
TTY: 613-727-7766
Fax: 613-727-7632
Contact: <https://www.algonquincollege.com/ro>

Contact Information

Program Coordinator(s)

- John McKinlay-Key, <mailto:mckinlj@algonquincollege.com> , 613-727-4723, ext. 2956
- Hugh Smith, <mailto:smithh1@algonquincollege.com> , 613-727-4723, ext. 2958

Course Descriptions

BUS1430 Applied Business Practices

Possessing an appreciation of how a business operates, as well as the roles and responsibilities associated with running a business prepares students for entry into industry and future entrepreneurship opportunities. Students examine the factors involved in starting and maintaining a cabinetmaking business. Topics include estimating, overhead costs, labour costs, human resource management, applicable government regulations, marketing, financial obligations and shop equipment and layout.

Prerequisite(s): none
Corerequisite(s):none

CAM1420 CNC/Drafting and Plan Reading I

The use of technology in cabinetmaking is becoming increasingly important and widely practised. The ability to understand and use such technologies is essential in this advancing industry. Students learn to read and interpret blueprints and plans, as well as use computers in the design and manufacture of furniture components and cabinetry. Through hands-on practical experience in the lab environment, students develop the necessary skills and knowledge to program and operate a computer numerically controlled (CNC) router using commercial cabinet design software.

Prerequisite(s): DRA1410
Corerequisite(s):none

CAM1431 CNC/Drafting and Plan Reading II

Exposure to a variety of the industry-standard technologies increases confidence and awareness. Building on previously learned knowledge, students continue to advance skills focusing on plan interpretation and on more versatile and complex program packages dealing with CNC machinery and design. Through instruction and discussion of concept, applications and coding systems of CNC machines, students examine CNC manufacturing methods and develop the technical understanding required to operate such machinery.

Prerequisite(s): CAM1420

Corerequisite(s):none

DRA1410 Drafting for Cabinetmakers

Geometrical representations are used universally to communicate ideas and information. The ability to accurately interpret and create graphical drawings and sketches is a fundamental skill. Through discussion, demonstrations, assignments, and practical examples of fundamental geometric layout, students develop skills to design, draft and sketch cabinets and furniture.

Prerequisite(s): none
Corerequisite(s):none

ENL1813T Communications I

Communication remains an essential skill sought by employers, regardless of discipline or field of study. Using a practical, vocation-oriented approach, students focus on meeting the requirements of effective communication. Through a combination of lectures, exercises, and independent learning, students practise writing, speaking, reading, listening, locating and documenting information and using technology to communicate professionally. Students develop and strengthen communication skills that contribute to success in both educational and workplace environments.

Prerequisite(s): none
Corerequisite(s):none

ENL2003 Communications II for Technicians

Communicating effectively in the workplace is a key component of career advancement and essential skills development. The ability to read, understand, reframe and deliver technical information to varied audiences is critical in a competitive marketplace. Students are exposed to a variety of common communication challenges related to working in their field of study. To meet these challenges, students are required to do basic research and data gathering, to summarize and reframe written, oral and visual information and to present their findings to a defined audience in an appropriate medium or media.

Prerequisite(s): ENL1813T
Corerequisite(s):none

GED0575 General Education Elective

Students choose one course, from a group of general education electives, which meets one of the following five theme requirements: Arts in Society, Civic Life, Social and Cultural Understanding, Personal Understanding, and Science and Technology.

Prerequisite(s): none
Corerequisite(s):none

GED0575 General Education Elective

Students choose one course, from a group of general education electives, which meets one of the following five theme requirements: Arts in Society, Civic Life, Social and Cultural Understanding, Personal Understanding, and Science and Technology.

Prerequisite(s): none
Corerequisite(s):none

GED2012 Achieving Success in the 21st Century

Rapid changes in technology have created new employment and business opportunities that challenge each of us to find our place as citizens in the emerging society. Life in the 21st century presents significant opportunities, creates potential hazards and demands that we face new responsibilities in ethical ways. Students explore the possibilities ahead, assess their own aptitudes and strengths, and apply critical thinking and decision-making tools to help resolve some of the

important issues present in our complex society with its competing interests.

Prerequisite(s): none
Corerequisite(s):none

WOO0004 Furniture, Kitchens and Millwork

Students explore two separate aspects of the trade, kitchen cabinetry and the application of veneers. In the kitchen cabinetry portion focus is on productivity, efficiency, techniques and the use of modern materials. Students learn how to operate the precision equipment designed to dimension and machine cabinetry components using industry-standard systems of construction. The veneer portion revolves around creativity, further refinement of hand skills and attention to detail using veneer-specific glues and equipment.

Prerequisite(s): WOO8939 and WOO8940
Corerequisite(s):WOO1430

WOO1410 Wood Technology

Possessing a broad knowledge of manufactured and natural materials in order to make the proper choices with regards to application and sustainability is a requirement in the industry. Students analyze the principles of tree growth, cell structure and species identification, as well as examine the procedures in timber conversion, lumber seasoning and the grading process. Through discussions and analysis, students explore the use, manufacture, estimating and ordering requirements of wood composites and lumber.

Prerequisite(s): none
Corerequisite(s):WOO8930 and WOO8938

WOO1421 Basic Furniture Finishing

The quality of the final product is dependent on meticulous care of surfaces. Students acquire theoretical knowledge and demonstrate that knowledge in the lab environment. Through practical application, students learn the fundamentals of proper traditional surface preparation and the specifications and application of various stains and finishes common in industry.

Prerequisite(s): WOO8930
Corerequisite(s):WOO1422 and WOO8939 and WOO8940

WOO1422 Furniture History and Cabinet Construction

Changes in technology and availability of raw materials have resulted in the evolution of today's industry standards accepted in the furniture and cabinetmaking trade. Students identify and develop an appreciation for furniture styles, traditional woods and construction methods associated with different periods. Through discussion and demonstration, students examine the traditional and modern methods of constructing furniture and cabinets including custom and production applications.

Prerequisite(s): none
Corerequisite(s):WOO1421 and WOO8939 and WOO8940

WOO1430 Commercial Cabinetry Theory

Given the vast demand of production-based kitchen and bath cabinetry, industry professionals require in-depth knowledge of the materials and production methods. Today's production methods for kitchen and bath cabinets are largely technology-driven. Students analyze commercial applications and methods of current cabinet construction. Topics include construction materials, machines and techniques. Students examine various production considerations such as system holes and the identification and application of hardware compatible with today's industry systems.

Prerequisite(s): WOO1422
Corerequisite(s):WOO8942

WOO8910 Furniture Finishing and Touch-Up

The main visual and tactile components of furniture are the finish. Students gain a working knowledge of the materials, applications, and equipment necessary to apply modern surface coatings to furniture according to trade specifications. Through the use of state-of-the-art equipment and materials, students develop skills necessary to produce quality finishes.

Prerequisite(s): WOO1421 and WOO8939
Corerequisite(s):none

WOO8930 Joinery

Success in the cabinetmaking trade requires strong hand skills and appreciation for attention to detail. Students progress from developing skills and knowledge of traditional hand joinery to fundamental stationary machine operations to produce and assemble furniture components. Problem-solving and repetition with increasing difficulty lead to an elevated level of skill and safe practices expected in industry. Students construct projects using a wide range of hand tools, portable power tools and basic stationary machinery while practising fundamentals of layout, wood joinery, machine and shop safety and assembly procedures.

Prerequisite(s): none
Corerequisite(s):WOO1410 and WOO8938

WOO8938 Hand Tools and Machine Basics

Proper use and safety of the tools of the trade are paramount. Students examine various hand tools and machinery used in the trade. Through practical demonstrations of both tools and machinery, students learn the safe and proper use in the preparation of stock.

Prerequisite(s): none
Corerequisite(s):WOO1410 and WOO8930

WOO8939 Furniture Making

The evolution of technology has led to a greater reliance on machinery. However, hand tools also remain relevant within the industry. Students apply theoretical knowledge through activities demonstrating skill in the layout of projects, preparing cutting lists, basic and advanced furniture construction techniques, advanced machining operations, and the creation of jigs and templates used to generate complex component parts. Emphasis is placed on analysis, design and construction of complex pieces of furniture. In a collaborative, team-based project, students analyze, select and implement the most appropriate joinery based on the requirements and historical perspective of the case piece to be constructed.

Prerequisite(s): WOO8930 and WOO8938
Corerequisite(s):WOO1421 and WOO1422 and WOO8940

WOO8940 Advanced Machining

Today's cabinetmaking machinery requires both specialized training and maintenance effectively allowing increased efficiency for completion of complicated tasks. Through theoretical knowledge of manufacturer's specifications and practical application, students discover the correct and safe operation and maintenance of machines through discussion and demonstration.

Prerequisite(s): WOO8930 and WOO8938
Corerequisite(s):WOO1421 and WOO1422 and WOO8939