AMATI ACADEMY

INITIAL COURSE PLAN 2

Panel Production, Cutting, Edge Banding & Machining

Version	1.0
Date	September 2026
Status	Pre-Operational Course Plan
Duration	Approximately 14 instructional hours over 2 days
Planned Class Size	Approximately 10-15 participants, subject to equipment and supervision capacity

COURSE STATUS

This document describes a proposed future practical course for pilot development and delivery under AMATI Academy Curriculum Version 1.0. It continues the workflow established in Initial Course Plan 1 and does not represent an existing class or completed training outcome.

1. COURSE PURPOSE

This course continues the workflow established in Initial Course Plan 1 by taking an approved digital production-preparation package into supervised physical component production. Participants use the drawings, part lists, cutting information, edge specifications, and labels to verify materials, sequence work, cut and prepare stock, apply edge banding, complete selected machining or joinery, and perform stage-specific quality checks.

The course ends with verified, labeled, and organized components ready for Initial Course Plan 3. Final assembly, hardware installation and adjustment, surface preparation, and final product inspection are outside this course.

2. TARGET PARTICIPANTS AND PREREQUISITES

- Participants who completed Initial Course Plan 1
- Participants with instructor-approved equivalent knowledge of production drawings, part lists, cutting information, and part identification
- Existing cabinet, furniture, or interior-production workers developing panel-processing skills
- Workers seeking more systematic and repeatable production methods

Participants must begin with an instructor-approved production package for the training project. Prior machine experience is not required for introductory exercises unless a particular operation requires additional prerequisite skill. Before any machine operation, participants receive applicable machine-specific safety instruction and must demonstrate understanding of the required procedure.

3. COURSE FORMAT AND TRAINING PROJECT

The course uses a small frameless cabinet or vanity project continuing from Course Plan 1, or an equivalent instructor-approved package. Participants are organized into small working groups according to class size, equipment availability, project requirements, and supervision capacity.

- Instructor demonstrations and machine-specific safety instruction
- Individual practical tasks and competency observations
- Dimensional and stage-specific quality verification
- Small-group supervised production activities
- Productive non-machine work while waiting for equipment access
- Final instructor assessment

For a planned class of approximately 10-15 participants, groups will generally contain about 4-5 participants. Each active machine station must have adequate qualified supervision. Group completion does not establish individual competency: each participant must be directly observed performing sufficient assigned practical work. The course does not assume that every participant will manufacture every component or operate every available machine within 14 instructional hours.

4. LEARNING OBJECTIVES

- Verify materials against approved production information and identify discrepancies before processing
- Interpret cutting diagrams, part lists, labels, and edge specifications
- Produce repeatable components to defined exercise requirements
- Apply specified edge banding and evaluate edge quality
- Use stops, fences, templates, jigs, and reference systems to improve repeatability
- Understand how systematic non-CNC methods support repeatability and efficiency
- Verify dimensions, edge condition, machining position, and component consistency
- Prepare completed components for transfer to the next production stage
- Organize parts and establish a logical production sequence
- Prepare material and perform assigned cutting operations safely under supervision
- Maintain part identification throughout production
- Perform selected drilling, machining, or joinery operations appropriate to the project
- Apply relevant 32-mm-system principles where appropriate
- Understand at a basic level how digital production information relates to CNC workflows
- Identify and address appropriate production errors before assembly

5. REQUIRED EQUIPMENT, TOOLS, MATERIALS, AND RESOURCES

Training equipment may include, as appropriate to the project and available location

- Sliding table saw
- Industrial spindle moulder/shaper with sliding table
- Jointer-planer
- Portable woodworking and machining tools
- Measuring and inspection equipment
- Required machine guards and safety equipment
- Automatic edge bander
- Band saw
- Sliding miter saw
- Stops, fences, templates, and jigs
- Dust-extraction systems
- Applicable personal protective equipment

Training materials and resources

- Approved production drawings, part lists, and cutting diagrams
- Panel and edge-banding materials
- Production-sequencing worksheet
- Applicable manufacturer instructions for equipment used
- Edge-banding specifications and production labels
- Representative machining or hardware references where required
- Dimensional inspection and quality-control records

Not every listed machine is required in every delivery. Operations are selected according to the project, available equipment, instructor qualifications, participant readiness, safety requirements, and instructional time. Additional specialized machinery is included only where it is actually available and appropriate.

6. DAY 1 - MATERIAL VERIFICATION, SEQUENCING, AND CUTTING

Time	Session	Primary Output / Focus
09:00-09:30	Course Orientation and Production Package Review	Approved production information and workflow confirmed
09:30-10:00	Workshop and Production-Area Safety Orientation	Work zones, PPE, material handling, housekeeping, emergency procedures
10:00-11:00	Material Verification and Work Preparation	Material-verification record and production sequence
11:15-12:45	Cutting Systems and Production Demonstration	Machine setup principles and supervised cutting method
13:30-16:30	Supervised Cutting and Stock Preparation	Cut, identified, labeled, and checked components
16:30-17:00	Dimensional Check and Day 1 Review	Stage checkpoint before further processing

Material Verification and Work Preparation

Participants verify material type, thickness, condition, grain orientation where relevant, quantities, dimensions, edge requirements, cutting sequence, and reusable material or offcut considerations before processing begins.

Cutting Systems and Production Demonstration

Instruction addresses reference edges, setup principles, stops and fences, work support, blade considerations, material positioning, ripping and crosscutting principles, repeat cuts, safe feed procedures, material handling, kickback awareness, and dimensional verification. Applicable machine-specific safety instruction is completed before participant operation.

Supervised Cutting and Stock Preparation

- Follow approved cutting information and maintain reference surfaces
- Identify and label parts immediately after processing
- Manage reusable offcuts and maintain an organized work area
- Produce and verify repeat cuts
- Separate completed and unprocessed parts
- Complete assigned verification or preparation work while waiting for machine access

Day 1 instructional time: approximately 7 hours.

7. DAY 2 - EDGE BANDING, MACHINING, AND PRODUCTION VERIFICATION

Time	Session	Primary Output / Focus
09:00-09:30	Production Review and Machine-Specific Safety Preparation	Parts, edge requirements, machining references, guards, and work area confirmed
09:30-11:30	Edge Banding	Specified edges applied and inspected
11:45-13:15	Selected Machining and Joinery	Required project features prepared under supervision
13:45-14:45	Systematic Non-CNC Production and CNC Workflow Concepts	Repeatable non-CNC methods and CNC relationship understood
15:00-16:00	Production Quality Check and Assembly Handoff	Components checked, labeled, organized, and staged
16:00-17:00	Individual Practical Assessment and Course Review	Competency observations and records completed

Edge Banding

Instructor demonstration and supervised work address panel-edge preparation, edge-material selection, orientation, setup principles, feed and support, adhesion and trimming quality, corners and transitions, visual inspection, common defects, and appropriate correction procedures.

Selected Machining and Joinery

Depending on the approved project, operations may include drilling, grooves or rebates, joinery or connector preparation, hardware-related machining, templates and jigs, stops and reference systems, work holding, and repeat-machining procedures. Participants perform only operations included in the approved exercise.

Systematic Non-CNC Production and CNC Workflow Concepts

Training addresses standardized dimensions, 32-mm-system principles where applicable, stops and fences, templates, jigs, batch processing, part tracking, repeatable setups, and digital information flowing from planning into workshop production. Conventional-machine methods are not presented as equivalent to CNC capability; the course explains where systematic non-CNC methods improve repeatability and where CNC systems provide different or additional capabilities.

Production Quality Check and Assembly Handoff

Participants check dimensions, part identification and quantity, edge placement and quality, machining position and consistency, surface condition, visible damage, and stage completeness. Components are then labeled, organized, and staged for Course Plan 3.

Day 2 instructional time: approximately 7 hours. Total course duration: approximately 14 instructional hours.

8. PARTICIPANT DELIVERABLES

The group project provides a common production context; individual records establish what each participant personally demonstrated.

- Material-verification record
- Cut and identified project components
- Specified edge-banded components
- Dimensional inspection results
- Components organized for transfer to assembly
- Production-sequencing worksheet
- Production labels
- Selected machined or joinery-prepared components
- Stage-specific quality-control checklist

Individual records identify the operations performed, components worked on, relevant checks, instructor observations, and competency result.

9. ASSESSMENT AND COMPETENCY

Assessment is based on direct instructor observation, participant work, production records, and completed components. Group output alone does not establish individual competency.

- Interpretation of production information
- Safe working procedures and setup understanding
- Part identification and labeling
- Machining accuracy and use of reference systems
- Preparation of components for the next production stage
- Material verification and production organization
- Cutting accuracy and repeatability
- Edge-banding quality
- Dimensional verification and error identification

Competency is recorded for each applicable practical area as Competent or Needs Additional Practice. Individual competency is recorded only for operations actually assigned and observed; course completion does not imply competency on every machine listed in this plan.

Exercise-specific tolerances are established before practical work based on the approved drawing, material, operation, joinery or hardware requirement, and equipment. No universal tolerance is applied to every exercise.

Safety requirements are mandatory. A participant who does not demonstrate the required safety competency does not proceed with the related machine operation until additional instruction and reassessment are completed.

10. COMPETENCY EXPECTATION

A participant assessed as competent in the applicable course activities should be able to use approved production information to organize and perform assigned panel-processing operations safely and systematically under appropriate supervision, then inspect and prepare the resulting components for assembly. Accuracy, part tracking, repeatability, workflow organization, safety, and quality verification are treated as connected parts of one production system.

11. INSTRUCTOR GUIDANCE

- Review the production package and material requirements before physical work begins
- Plan small-group machine access and productive non-machine tasks before delivery
- Provide applicable machine-specific safety instruction immediately before practical operation
- Rotate practical participation so individual competency can be observed
- Require immediate part identification and verification after processing
- Explain downstream consequences of inaccurate cutting, edge banding, or machining
- Distinguish clearly between systematic non-CNC methods and CNC capability
- Confirm exercises match available equipment, qualified supervision, participant readiness, and instructional time
- Verify equipment condition, guarding, and training readiness before participant use
- Ensure adequate qualified supervision for every active machine station
- Set and communicate exercise-specific reference dimensions and tolerances before work begins
- Emphasize repeatable systems and technical control rather than unnecessary speed
- Stop unsafe operations immediately and distinguish safety violations from correctable technical errors
- Document recurring technical, safety, scheduling, or instructional issues for curriculum review

Course delivery requires demonstrated competence with the machines, production methods, and safety procedures used in the approved exercises.

12. SAFETY AND MACHINE OPERATION

Safety instruction is integrated throughout the course. No participant operates a machine before receiving applicable machine-specific instruction and demonstrating understanding of the required procedure. Safety instruction and competency observations are documented using the applicable AMATI training records.

- Machine guarding and emergency-stop locations
- Dust extraction and workpiece support
- Feed direction and kickback hazards
- Work holding and material handling
- Applicable personal protective equipment
- Safe hand positioning and push devices where required
- Blade and cutter hazards
- Safe operating zones, housekeeping, and clear walkways

Participant machine operation occurs only under appropriate supervision. Ordinary participant exercises exclude machine servicing, repair, guard removal, hazardous-energy-control procedures, and other maintenance requiring authorization or specialized qualification. Such work is restricted to appropriately authorized persons under the training location’s procedures.

Machine use follows applicable manufacturer instructions and workplace safety requirements. Course completion does not confer OSHA, manufacturer, or machine certification and does not by itself authorize unsupervised workplace machine operation.

13. RELATIONSHIP TO AMATI ACADEMY CURRICULUM VERSION 1.0

This course continues the workflow introduced in Initial Course Plan 1 and corresponds primarily to the following master-curriculum modules:

- Module 7 - Workshop Organization, Workflow, and Standardized Work
- Module 8 - Cutting and Stock Preparation
- Module 9 - Edge Banding, Machining, and Joinery
- Module 10 - Systematic Non-CNC Production and CNC Workflow Concepts

Earlier planning modules remain relevant because participants continue using approved drawings, part lists, labels, and production information during physical manufacturing. The master curriculum provides greater depth and practice time than this short-format course; Course Plan 2 is a focused practical application of selected competencies, not the complete AMATI manufacturing curriculum.

14. BOUNDARY WITH INITIAL COURSE PLAN 3

Course Plan 2 ends when the applicable components are cut, identified, edge-banded, machined as required, dimensionally verified, stage-specific quality-checked, labeled, organized, and staged for assembly.

Reserved for Initial Course Plan 3

- Final component assembly
- Assembly-related workflow
- Final functional inspection
- Modern hardware installation and adjustment
- Surface preparation where applicable
- Final visual quality control and project inspection

Completion of Course Plan 2 therefore represents completion of the component-production stage, not completion of the finished furniture project.

15. VERSION RECORD

Document	AMATI Academy Initial Course Plan 2 - Panel Production, Cutting, Edge Banding & Machining
Version	1.0
Date	September 2026
Status	Pre-Operational Course Plan
Duration	Approximately 14 instructional hours over 2 days
Purpose	Establish the second short-format practical course in the AMATI Academy training sequence, connecting approved digital production preparation with supervised physical component production and preparation for assembly.