AMATI ACADEMY

INITIAL COURSE PLAN 3

Assembly, Hardware Installation, Adjustment & Quality Control

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 workstation, tool, project, 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 is the third stage of the initial three-course practical sequence and does not represent an existing class, completed training outcome, or completion of the full AMATI Academy core pathway.

1. COURSE PURPOSE

This course completes the initial three-course practical sequence by taking verified, labeled, and machined components from Initial Course Plan 2, or an equivalent instructor-approved component set and production package, through assembly, hardware installation, adjustment, functional testing, applicable surface preparation, and final quality control.

Training includes pre-assembly verification, assembly planning and sequencing, alignment and squareness control, dimensional verification, modern cabinet hardware installation, adjustment, appropriate minor corrective work, documented quality control, and final inspection.

The course concludes with an assembled, functional, adjusted, and inspected training project. Decorative coating, spraying, staining, and other higher-exposure finishing operations are outside the standard scope of this course. Any future separately approved finishing exercise would require appropriate equipment, exposure controls, PPE, product-specific safety information, and qualified supervision.

2. TARGET PARTICIPANTS AND PREREQUISITES

- Participants who completed Initial Course Plan 2
- Participants with equivalent experience and an instructor-approved production package and component set
- Existing cabinet, furniture, or interior-production workers developing assembly and hardware skills
- Workers seeking more systematic assembly, adjustment, and quality-control methods

Participants should be able to interpret basic production drawings, identify project components, use basic measuring tools, and understand component orientation and reference points. Specific prerequisite skill levels may vary with the tools, hardware, and exercises included in a particular delivery. Applicable tool-specific safety instruction is completed before participant operation.

3. COURSE FORMAT AND TRAINING PROJECT

The course continues the same small frameless cabinet or vanity project developed through Courses 1 and 2, or an equivalent instructor-approved project. Participants verify the prepared component set, plan the assembly sequence, assemble the project, install and adjust specified hardware, perform applicable surface preparation, and complete functional and quality-control procedures.

- Instructor demonstrations and supervised practical work
- Small-group project activities and individual practical tasks
- Defined instructor checkpoints and direct competency observations
- Functional, dimensional, and visual inspection
- Productive tasks while waiting for shared tools or jigs
- Final instructor review and competency documentation

For a planned class of approximately 10-15 participants, groups will generally contain about 4-5 participants. Groups may work in parallel when resources and supervision permit. Shared tools, jigs, or workstations are scheduled between groups. Group completion does not establish individual competency: each participant must personally demonstrate sufficient assigned practical work, and the operations performed are documented.

4. LEARNING OBJECTIVES

- Verify components against approved production information before assembly
- Plan a logical assembly sequence and organized workspace
- Assemble components while controlling alignment, squareness, and diagonals
- Install applicable modern cabinet hardware using current manufacturer technical information
- Evaluate gaps, clearances, alignment, movement, and functional fit
- Recognize the effect of accumulated production tolerances on final fit
- Distinguish correctable minor defects from issues requiring greater rework or replacement
- Prepare the completed training project for final presentation or the next applicable stage
- Identify missing, damaged, incorrectly machined, or inconsistent components
- Use appropriate reference surfaces, clamps, fixtures, and measuring methods
- Verify critical dimensions during assembly
- Position and adjust hinges, drawer systems, and other applicable hardware
- Distinguish an adjustment issue from an upstream machining or assembly error
- Perform applicable light surface preparation and minor corrective work
- Complete functional testing, final quality control, and corrective-action documentation

5. REQUIRED TOOLS, HARDWARE, MATERIALS, AND RESOURCES

Tools and equipment may include, as appropriate to the approved exercise

- Cordless drills and drivers
- Portable drilling or boring jigs
- Squares, straightedges, and tape measures
- Diagonal-measurement methods
- Portable sanding equipment where appropriate
- Dust extraction where required
- Appropriate bits and installation tooling
- Hand tools and clamps
- Calipers where appropriate
- Assembly tables or workbenches
- Hardware-specific installation aids
- Applicable personal protective equipment

Hardware, materials, and training resources

- Concealed hinges, mounting plates, and drawer systems
- Appropriate adhesives or abrasives where required by the exercise
- Applicable manufacturer technical information
- Hardware-installation and functional-test records
- Mechanical connectors, shelf supports, and adjustment systems
- Approved production package and Course Plan 2 quality records
- Assembly-sequencing and pre-assembly verification records
- Final quality-control and corrective-action records

Specific brands may be used as technical examples without implying sponsorship, endorsement, or partnership. Not every listed tool or hardware system is required in every delivery.

6. DAY 1 - PRE-ASSEMBLY VERIFICATION AND ASSEMBLY

Breaks and meal periods are excluded from instructional-hour calculations.

Time	Session	Primary Output / Focus
09:00-09:30	Course Orientation and Safety Overview	Project, documentation, workflow, tool-use requirements, and safety expectations reviewed
09:30-10:30	Pre-Assembly Verification	Component set checked and discrepancies corrected or documented
10:45-11:30	Assembly Planning and Demonstration	Sequence, references, clamping, squareness, diagonal checks, and fastening demonstrated
11:30-13:00	Supervised Assembly - Stage 1	Initial assembly with verification before permanent fastening
13:30-16:00	Supervised Assembly - Stage 2	Assembly completed with dimensional, diagonal, and alignment checks
16:00-16:45	Assembly Quality Check and Day 1 Review	Issues affecting hardware, function, or final quality identified

Pre-Assembly Verification

Participants inspect quantities, dimensions, edge placement, machining location, component orientation, surface condition, damage, missing operations, and assembly readiness. Significant discrepancies are corrected or documented before assembly proceeds.

Assembly Planning and Supervised Assembly

Instruction addresses workspace organization, assembly sequence, reference surfaces, clamping, squareness, diagonal verification, fastening methods, protection of visible surfaces, and dimensional checks during assembly. Appropriate adhesives may be used only where required by the approved exercise and in accordance with applicable product instructions and safety controls.

Groups continue assembly under defined instructor checkpoints. Participants not actively performing an assembly operation complete related measurement, inspection, hardware-preparation, or documentation work.

Day 1 instructional time: approximately 7 hours.

7. DAY 2 - HARDWARE, ADJUSTMENT, SURFACE PREPARATION, AND FINAL QUALITY CONTROL

Time	Session	Primary Output / Focus
09:00-09:30	Assembly Review and Tool-Specific Safety Preparation	Assembly condition, hardware, tooling, references, and safety procedures confirmed
09:30-12:00	Hardware Installation	Applicable hardware installed using current technical information
12:00-13:00	Hardware Adjustment and Functional Testing	Alignment, clearance, movement, engagement, and fit evaluated and adjusted
13:30-14:30	Applicable Surface Preparation and Minor Corrections	Appropriate light preparation and limited corrective work completed
14:30-15:45	Final Quality Control	Dimensional, visual, hardware, and functional inspection documented
15:45-16:30	Final Corrections, Reinspection, and Assessment	Corrections verified and competency records completed

Hardware Installation and Adjustment

Instructor demonstration and supervised work may include concealed hinges, mounting plates, drawer slides or drawer systems, mechanical connectors, shelf supports, and other project-specific hardware. Participants use current applicable manufacturer technical information, verify reference dimensions before drilling or fastening, and complete sufficient assigned work for individual assessment.

Adjustment and functional testing address door and drawer position, gaps and reveals, clearances, opening and closing movement, hardware engagement, contact points, and overall fit. Participants distinguish adjustment issues from underlying component, machining, or assembly errors.

Surface Preparation, Final Quality Control, and Reinspection

Where appropriate, participants clean production residue, remove suitable minor marks, perform light sanding or limited surface correction, and prepare visible surfaces for inspection. Defects requiring greater rework or replacement are documented rather than forced into an unsuitable short-course correction.

Final inspection addresses overall dimensions, squareness, joint condition, component alignment, door and drawer gaps, hardware operation and adjustment, clearances, edge and surface condition, damage, cleanliness, and functional performance. Individual competency observations occur throughout the course; the final block completes targeted reassessment and records.

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

8. PARTICIPANT DELIVERABLES

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

- Pre-assembly verification record
- Assembled training project
- Hardware-adjustment and functional-test results
- Final quality-control checklist
- Completed and inspected training project
- Assembly-sequencing record
- Installed project hardware
- Applicable surface-preparation work
- Corrective-action record where required

Individual records identify the operations personally performed, assembly and hardware activities demonstrated, adjustment and functional-testing work, quality-control tasks, instructor observations, and competency results.

9. ASSESSMENT AND COMPETENCY

Assessment is based on direct instructor observation, participant work, project condition, technical records, and completed inspection documentation. Group output alone does not establish individual competency.

- Pre-assembly verification and assembly sequencing
- Alignment, squareness, and dimensional control
- Hardware positioning and installation
- Surface preparation where applicable
- Appropriate corrective action and final inspection
- Component identification and workspace organization
- Safe tool use, clamping, and fastening methods
- Hardware adjustment and functional testing
- Defect identification and quality-control judgment

Exercise-specific tolerances and applicable manufacturer requirements are used rather than unsupported universal tolerance standards. 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 with every hardware system or tool listed in this plan.

Safety requirements are mandatory. A participant who does not demonstrate required safety competency does not continue the related 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 take a verified component set through assigned assembly, hardware-installation, adjustment, functional-testing, and final quality-control operations under appropriate supervision. The participant should understand how earlier measurement, modeling, cutting, edge banding, machining, and identification decisions affect final fit, function, and quality.

11. INSTRUCTOR GUIDANCE

- Verify the component set and unresolved discrepancies before assembly begins
- Plan group activities, shared-resource access, and productive waiting tasks before delivery
- Demonstrate procedures before participant application and rotate key operations for individual observation
- Require dimensional and diagonal verification during assembly rather than only after completion
- Require verification before drilling or fastening and teach adjustment as a controlled diagnostic process
- Use a consistent final quality-control process and stop unsafe tool use immediately
- Confirm exercises match available tools, qualified supervision, participant readiness, and instructional time
- Establish defined instructor checkpoints and an organized circulation pattern when groups work in parallel
- Set and communicate exercise-specific reference dimensions and tolerances
- Use current applicable manufacturer technical information for hardware installation
- Distinguish minor corrections from defects requiring substantial rework or replacement
- Document recurring technical, quality, safety, scheduling, or instructional issues for curriculum review

Course delivery requires demonstrated competence with the assembly methods, hardware systems, tools, product information, and quality-control procedures included in the approved exercises.

12. SAFETY AND TOOL OPERATION

Safety is integrated throughout the course. No participant uses applicable power tools or drilling equipment before receiving appropriate instruction and demonstrating understanding of the required procedure. Applicable safety instruction and competency observations are documented in participant training records.

- Portable power-tool operation and drilling/fastening
- Safe hand positioning and applicable PPE
- Sharp edges, hardware, and manual material handling
- Workpiece support, clamping, and pinch-point awareness
- Dust control and sanding operations
- Assembly-table organization, clear walkways, and cable management

Participants operate tools only under appropriate supervision. First attempts involving drilling, boring, or comparable higher-risk operations receive direct instructor oversight. Ordinary participant exercises exclude servicing, repair, hazardous-energy-control work, and other activities requiring separate authorization or specialized qualification.

Applicable manufacturer and product-specific safety information and training-location requirements are followed. Course completion does not confer OSHA, manufacturer, tool, or other regulatory certification and does not by itself authorize unsupervised workplace tool or equipment use.

13. RELATIONSHIP TO AMATI ACADEMY CURRICULUM VERSION 1.0

This course corresponds primarily to the following master-curriculum modules:

- Module 11 - Assembly and Modern Hardware
- Module 12 - Surface Preparation, Quality Control, and Final Inspection

Relevant principles from Module 7 - Workshop Organization, Workflow, and Standardized Work continue throughout the course. Course Plan 3 also integrates earlier knowledge because final assembly and inspection reveal whether upstream planning, cutting, edge banding, machining, labeling, and other production decisions were executed consistently.

14. RELATIONSHIP TO THE THREE-COURSE SEQUENCE

The three initial course plans form a coordinated short-format progression totaling approximately 41 instructional hours across three separate two-day courses:

Course Plan 1	Digital Project Planning & Production Preparation - approximately 13 instructional hours
Course Plan 2	Panel Production, Cutting, Edge Banding & Machining - approximately 14 instructional hours
Course Plan 3	Assembly, Hardware Installation, Adjustment & Quality Control - approximately 14 instructional hours

Together, the three courses connect a training project from measurement and digital production preparation through component production, assembly, hardware, adjustment, and final inspection. No individual two-day course is represented as completing the entire design-to-finished-project workflow.

This three-course sequence is an initial short-format implementation of selected curriculum areas and does not represent completion of the full AMATI Academy core pathway described in Curriculum Version 1.0.

15. VERSION RECORD

Document	AMATI Academy Initial Course Plan 3 - Assembly, Hardware Installation, Adjustment & Quality Control
Version	1.0
Date	September 2026
Status	Pre-Operational Course Plan
Duration	Approximately 14 instructional hours over 2 days
Relationship	Third and final stage of the initial three-course practical sequence, totaling approximately 41 instructional hours
Purpose	Complete the initial short-format sequence through assembly, modern hardware, adjustment, functional testing, and final quality control.