AMATI ACADEMY

INITIAL COURSE PLAN 1

Digital Project Planning & Production Preparation

Version	1.0
Date	September 2026
Status	Pre-Operational Course Plan
Duration	Approximately 13 instructional hours over 2 days
Planned Class Size	Approximately 10-15 participants

COURSE STATUS

This document describes a proposed future course for pilot development and delivery under AMATI Academy Curriculum Version 1.0. Physical manufacturing is not included in this course.

1. COURSE PURPOSE

This course teaches the digital planning and production-preparation sequence for a small panel-based cabinet or vanity project. Participants move from project measurement and analysis through preliminary modeling, detailed production modeling, drawings, material and hardware planning, part lists, edge specifications, cutting optimization, labeling, and final production-preparation review.

2. TARGET PARTICIPANTS AND PREREQUISITES

- New entrants seeking an introduction to digital production planning
- Existing cabinet, furniture, or interior-production workers updating digital workflow skills
- Workers transitioning from primarily manual planning methods
- Owners or supervisors seeking a better understanding of structured production preparation

Basic computer proficiency is expected. Prior CAD, SketchUp, or cabinet-design software experience is not required.

3. COURSE FORMAT AND TRAINING PROJECT

The course is delivered over two intensive instructor-led days using one continuous training project: a small frameless cabinet or vanity mock-up with defined dimensions, spatial constraints, material options, hardware requirements, and door or drawer configuration.

Instruction combines

- Short technical demonstrations
- Controlled physical measurement exercise
- Structured peer-review exercise
- Supervised computer-based work
- Instructor checkpoints
- Final instructor assessment

The project is intentionally limited in scale so the complete planning workflow can be completed within the available course time. Course capacity should be matched to available workstations and the instructor’s ability to review participant work effectively.

4. LEARNING OBJECTIVES

- Record and organize project measurements and constraints
- Create and efficiently revise a preliminary 3D model
- Develop a detailed production model
- Apply consistent part naming and organization
- Assign appropriate materials and grain direction
- Account for hardware requirements and clearances
- Prepare dimensioned production drawings
- Generate an accurate part list
- Define edge-banding requirements
- Generate and review cutting diagrams
- Prepare production labels
- Verify consistency across measurements, models, drawings, part lists, and production information
- Complete a structured production-preparation review before downstream manufacturing

5. REQUIRED SOFTWARE, TOOLS, AND RESOURCES

Software

- SketchUp Pro
- OpenCutList

Resources

- Sufficient computer workstations for individual or planned paired work
- Instructor computer and display system
- Workshop measurement mock-up
- Tape measures and squares
- Laser measuring equipment where appropriate
- Representative material and hardware samples
- Written project brief
- Material and hardware reference information
- Part-naming convention reference
- Production-preparation checklist
- Assessment forms

No woodworking machinery or power tools are operated during this course.

6. DAY 1 - MEASUREMENT AND MODELING

Time	Session	Primary Output
09:00-09:30	Course orientation, software setup, and workflow overview	Course readiness
09:30-11:00	Project Measurement and Analysis	Measurement record
11:15-13:15	Preliminary 3D Modeling	Preliminary model
14:00-16:30	Detailed Production Modeling - Part 1	Detailed model in progress
16:30-17:00	Instructor checkpoint and Day 1 review	Checkpoint

Project Measurement and Analysis

Participants measure the training mock-up and identify the information that will control later modeling and production preparation.

- Overall dimensions
- Reference points
- Available space
- Clearances
- Material thickness
- Hardware considerations
- Critical dimensions
- Production constraints

Output

Measurement and constraint record.

Preliminary 3D Modeling

Participants create a simplified SketchUp model showing overall dimensions, basic cabinet form, major divisions, door or drawer arrangement, and general proportions. An instructor-directed change is then introduced so participants practice revising the model efficiently.

Output

Preliminary model and revised concept.

Detailed Production Modeling - Part 1

- Components and assemblies
- Material thickness
- Part orientation
- Naming conventions
- Tags and model organization
- Material assignment
- Grain direction
- Edge requirements
- Clearances
- Hardware allowances

Day 1 instructional time: approximately 7 hours.

7. DAY 2 - PRODUCTION INFORMATION

Time	Session	Primary Output
09:00-11:00	Detailed Production Modeling - Part 2 and Production Drawings	Completed model and drawings
11:15-12:45	Materials, Hardware, and Part Lists	Selection record and part list
13:30-15:00	Cutting Optimization, Edge Specifications, and Labels	Cutting/edge/label package
15:00-16:00	Production-Preparation Review	Checked final package

Detailed Production Modeling - Part 2 and Production Drawings

Participants complete the model, verify dimensional and organizational consistency, and prepare required drawings. Topics include final dimensional verification, part consistency, plans and elevations, sections where required, construction details, and assembly information. An instructor checkpoint is completed before production data is generated.

Materials, Hardware, and Part Lists

Using provided technical information and representative options, participants select suitable materials and hardware, identify relevant clearances and production requirements, generate a part list, and verify quantities and dimensions against the model.

Cutting Optimization, Edge Specifications, and Labels

- Cutting diagrams
- Material grouping
- Grain orientation
- Edge-banding specifications
- Production labels
- Reusable-offcut information where appropriate

Software-generated output is reviewed for practical consistency before acceptance.

Production-Preparation Review

- Dimensions
- Part names and quantities
- Materials
- Hardware requirements
- Edge specifications
- Drawing consistency
- Cutting information
- Labels

Participants perform a short peer review using the same checklist and address identified issues where appropriate. Final competency determination remains with the instructor.

Day 2 instructional time: approximately 6 hours. Total course duration: approximately 13 instructional hours.

8. PARTICIPANT DELIVERABLES

Each participant, or each participant within an approved paired exercise where applicable, produces documented work demonstrating individual competency.

- Measurement and constraint record
- Preliminary 3D model
- Documented model revision
- Detailed production model
- Production drawing set
- Material and hardware selection record
- Part list
- Edge-banding specifications
- Cutting diagram
- Production labels
- Completed production-preparation checklist

9. ASSESSMENT AND COMPETENCY

Assessment is based on participant work and instructor observation rather than attendance alone.

Evaluation addresses

- Measurement accuracy
- Model organization
- Dimensional consistency
- Part identification
- Material and hardware planning
- Drawing completeness
- Part-list accuracy
- Edge specifications
- Cutting-layout practicality
- Label consistency
- Ability to identify and correct errors
- Consistency across the complete project package

Peer review is a learning activity and does not replace instructor assessment.

Competency result

Competent	Needs Additional Practice

A participant who does not yet meet a required competency may correct the relevant work and complete reassessment.

10. COMPETENCY EXPECTATION

A participant assessed as competent should be able to take a defined small cabinet or furniture project from measurement through an organized digital production-preparation package. Measurements, models, drawings, part information, materials, hardware requirements, edge information, and cutting output should be sufficiently complete and internally consistent for instructor approval before proceeding to a physical production stage.

Participants should also understand that digital tools support production planning but do not replace technical review and judgment.

11. INSTRUCTOR GUIDANCE

- Use one continuous project throughout the course
- Demonstrate each workflow stage before participant application
- Review measurement records before modeling begins
- Review preliminary models before detailed modeling
- Complete a checkpoint before production data is generated
- Explain why each item of production information is required
- Emphasize consistency across documents and digital output
- Show common planning errors and their downstream effects
- Require participants to verify software-generated information
- Encourage efficient modeling rather than unnecessary visual detail
- Connect digital preparation to later machining, assembly, and quality-control stages
- Document recurring technical or instructional issues for future curriculum review

Course delivery requires demonstrated proficiency in SketchUp Pro, OpenCutList, and the underlying cabinet or furniture production-planning workflow.

12. SAFETY AND WORK ENVIRONMENT

This course does not include participant operation of woodworking machinery or power tools.

- Safe use of hand measuring equipment
- Workstation ergonomics
- Clear walkways and cable management
- Awareness of surrounding workshop activity

The physical measurement exercise uses a static training mock-up and should be conducted away from active machine operations.

13. RELATIONSHIP TO AMATI ACADEMY CURRICULUM VERSION 1.0

This course provides a short-format entry point into the planning and digital-production portion of the AMATI Academy core curriculum. It corresponds primarily to:

- Module 2 - Measurement, Project Analysis, and Production Planning
- Module 3 - Preliminary 3D Modeling
- Module 4 - Detailed Production Modeling and Documentation
- Module 5 - Materials, Hardware, and Production Requirements
- Module 6 - Part Lists, Labeling, Cutting Optimization, and Edge Specifications

Hands-on manufacturing, machine operation, edge banding, machining, assembly, hardware installation, and physical quality-control training are addressed through separate practical training modules or courses.

14. VERSION RECORD

Document	AMATI Academy Initial Course Plan 1 - Digital Project Planning & Production Preparation
Version	1.0
Date	September 2026
Status	Pre-Operational Course Plan
Duration	Approximately 13 instructional hours over 2 days

Purpose: Establish the initial short-format digital planning and production-preparation course for future pilot delivery under AMATI Academy Curriculum Version 1.0.