AMATI ACADEMY

SketchUp for Cabinet & Furniture Production Planning

Proposed Course Plan for Authorized Training Center Review

Status	Proposed Course Plan - Pre-Operational
Duration	Approximately 13 instructional hours over 2 days
Planned Class Size	Approximately 10-15 participants
Primary Software	SketchUp Pro
Supporting Workflow	OpenCutList
AMATI Curriculum Basis	Initial Course Plan 1 - Digital Project Planning & Production Preparation, Version 1.0

1. Course Purpose

This course teaches participants to use SketchUp within a structured cabinet and furniture production-planning workflow. Participants move from project measurement and analysis through preliminary 3D modeling, detailed production modeling, drawings, materials and hardware planning, part information, cutting preparation, labeling, and final production-preparation review.

One continuous small cabinet or vanity project is used throughout the course so participants apply SketchUp skills in a realistic production-planning context.

2. Target Participants and Prerequisites

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

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

3. Learning Outcomes

- Record and organize project measurements, reference points, clearances, and constraints.
- Create and efficiently revise an accurate preliminary 3D model in SketchUp.
- Develop a detailed production model using organized components and assemblies.
- Apply consistent part naming, Tags, material information, grain direction, edge requirements, and hardware allowances.
- Prepare dimensioned production information and drawings appropriate to the training project.
- Generate and verify part information, cutting information, edge specifications, and production labels.
- Identify and correct inconsistencies before downstream manufacturing.
- Complete an organized digital production-preparation package for instructor approval.

4. Training Project

Participants work through one continuous small frameless cabinet or vanity project with defined dimensions, spatial constraints, material options, hardware requirements, and a door or drawer configuration. The project is intentionally limited in scale so the complete digital planning workflow can be completed within the available course time.

5. Day 1 - Measurement and SketchUp Modeling

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

Day 1 instructional content includes overall dimensions, reference points, available space, clearances, material thickness, hardware considerations, critical dimensions, components and assemblies, part orientation, naming conventions, Tags and model organization, material assignment, grain direction, edge requirements, and hardware allowances.

Day 1 instructional time: approximately 7 hours.

6. Day 2 - Production Information and Review

Time	Session	Primary Output / Focus
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, and label package
15:00-16:00	Production-Preparation Review	Checked final package

Participants complete the model, verify dimensional and organizational consistency, prepare required drawings, select and verify materials and hardware information, generate part information, and prepare cutting, edge, and label outputs. Software-generated information is reviewed for practical consistency before acceptance.

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

7. Participant Deliverables

- 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

8. Assessment and Competency

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

- Measurement accuracy and dimensional consistency.
- Model organization and part identification.
- Materials and hardware planning.
- Drawing completeness and production-information consistency.

- Part-list accuracy, edge specifications, cutting-layout practicality, and label consistency.
- Ability to identify and correct errors across the complete project package.

Competency result: Competent or Needs Additional Practice. A participant who does not yet meet a required competency may correct the relevant work and complete reassessment.

9. 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 professional judgment.

10. Instructor Guidance

- Use one continuous project throughout the course and demonstrate each workflow stage before participant application.
- Review measurement records before modeling, preliminary models before detailed modeling, and the model before production data is generated.
- Require participants to verify software-generated information and explain why each item of production information is required.
- Emphasize efficient modeling, consistency across documents and digital output, and the downstream effects of common planning errors.
- Connect digital preparation to later machining, assembly, and quality-control stages.

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

11. Safety and Work Environment

This course does not include participant operation of woodworking machinery or power tools. The physical measurement exercise uses a static training mock-up and should be conducted away from active machine operations. Workstation ergonomics, cable management, safe measuring practices, and awareness of surrounding workshop activity are addressed as applicable.

12. Relationship to AMATI Academy Curriculum

This course presents the SketchUp-focused implementation of the planning and digital-production portion of AMATI Academy Initial Course Plan 1. 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

Physical manufacturing, machine operation, edge banding, machining, assembly, hardware installation, and physical quality-control training are addressed through separate AMATI Academy practical courses.

Review Status
Prepared as a proposed course plan for Authorized Training Center review. This document does not represent current SketchUp authorization, endorsement, certification, or approval.