SP FabLab

Department of Academy Quality & Resources

FabLab Quotation Generator
User Handbook

Prepared for:	**SP FabLab Staff**
Version:	**1.0**
Last Updated:	**Feb 2026**

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1   Overview

The SP FabLab Quotation Generator is a browser-based tool used by FabLab staff to quickly and accurately prepare quotations for internal projects, external client projects, and external workshops or courses. It calculates material costs, machine usage, surcharges, and GST automatically, and generates a print-ready PDF quotation with a single click.

Key capabilities:

- Three quotation types: Internal, External, and External Workshop / Course
- Automatic calculation of SP Charge Rate (18.5%) and GST (9%) for external quotes
- Fees & Extras: Design Fee, Expedited Work, Student Helpers, Staff Charges, and Project Expenses
- Workshop / Course mode with course module selector and date scheduling
- Saved Quote Log for retrieving and reprinting past quotations
- Delivery Order (DO) generation from any saved quote

Figure: Full view of the FabLab Quotation Generator interface

2   Getting Started

2.1 Accessing the Tool

The tool is a single HTML file. Open it in any modern web browser (Chrome, Edge, or Firefox recommended). No installation or internet connection is required once you have the file.

> 💡 **Browser Tip**
>
> Use Google Chrome or Microsoft Edge for the best print-to-PDF experience. The print dialog will suggest the correct filename automatically.

2.2 Interface Layout

The interface is divided into three main areas:

Header Bar	Contains the SP FabLab title, and three action buttons: Reset, Preview, and Save & Print.
Tabs	Switch between the Quote Builder (where you build quotes) and the Quote Log (where saved quotes are stored).
Quote Builder	The main working area, split into a left panel for data entry and a right sidebar showing the live cost summary.

Figure: Interface layout — header, tabs, builder panel, and summary sidebar
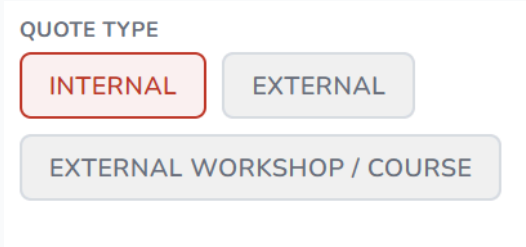
2.3 Starting a New Quote

1. Open the tool in your browser.
2. The Quote Builder tab is active by default.
3. A reference number and today's date are pre-filled automatically.
4. Select the Quote Type (Internal, External, or External Workshop / Course).
5. Fill in the client and project details, then add line items.
6. Review the live cost summary in the sidebar, then click Save & Print.

3   Quote Types

Select the quote type using the radio buttons in the Project Information section. The choice determines which sections are visible, how pricing is calculated, and what the final quotation document looks like.

Type	Best Used For	Key Differences
Internal	FYP projects, internal events, school departments	No surcharge or GST. Includes Internal Vires charging details. Ref No. prefixed SP-TTC/.
External	External clients, companies, government agencies	SP Charge Rate (18.5%) + GST (9%) applied. Staff Charges and Project Expenses available. Ref No. prefixed SP-TTC/.
Workshop / Course	External training, workshops, public courses	No SP-TTC/ prefix. Course module selector with dates. Single overall course fee. No accessories or design/expedited fees.

Figure: Quote Type radio buttons — Internal, External, External Workshop / Course

4   Project Information

This section appears at the top of the Quote Builder and applies to all quote types.

Figure: Project Information section — client name, job title, ref no., date, quote type

Client Name	The name of the department, company, or individual requesting the work.
Job Title	A short description of the project or job (e.g. FYP Exhibition Display, STEM Workshop Run 2).
Project Ref No.	Auto-generated but editable. For Internal and External quotes, the prefix SP-TTC/ is shown automatically. For Workshop/Course quotes, enter a reference number freely with no prefix.
Date	Auto-set to today. Change if you need to backdate or post-date the quote.
Quote Type	Select Internal, External, or External Workshop / Course. This controls which sections and fees are shown.

The Project Ref No., Client Name, and Date are all printed on the final quotation. Ensure they are correct before printing.

5 Internal Quotation

Use this type for jobs requested by SP departments, faculties, or student groups. No surcharge or GST applies. The printed quotation includes an Internal Vires section with SP accounting codes for cost transfers.

5.1 Line Items

Each line item represents one type of material or printed output. Click + Add Line Item to add a row.

Figure: Line Items section — material type dropdown and fields

Material Types available:

Acrylic	Select size (A7–A2) and thickness (3mm, 5mm, 10mm). Price is auto-filled.
Plywood 3/5mm	Select size and thickness (3mm or 5mm). Price is auto-filled.
Vinyl	Select a size tier (Small, Medium, Large, Extra Large). Price is auto-filled.
Cardboard Single Wall	Select thickness (5mm, 10mm, 15mm) and sheet size (A0–A3). Price is auto-filled.
Cardboard Double Wall	Same as Single Wall but with double-wall pricing.
3D Print — PLA / PETG	Select filament type (PLA or PETG) and enter weight in grams. Cost calculated at $25/kg.
Gypsum Powder	Select shape (Round $13, Hexagon $13, Cube Small — custom, Others — custom).

5.2 Machine Usage

Each material type automatically assigns the appropriate machine. Enter the number of hours per item and the quantity. Machine cost is calculated automatically.

3D Printer	$5.00 / hr
Laser Cutter	$40.50 / hr
Large Format Printer	$45.00 / hr
Cardboard Cutter	$45.00 / hr
Gypsum Powder	No machine required

5.3 Accessories & Consumables

Add any additional consumables or accessories not covered by the material types (e.g. spray paint, tape, fixings). Click + Add Accessory and enter a description and price.
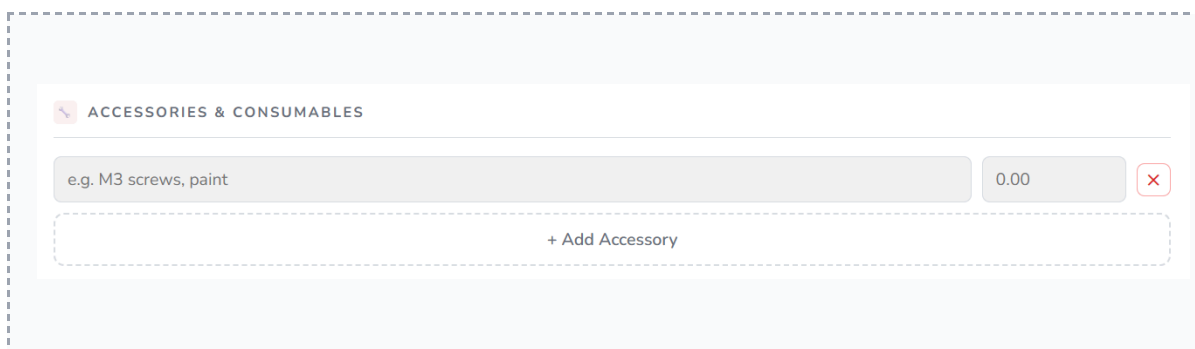

Figure: Accessories & Consumables section with a sample accessory row

5.4 The Internal Vires Block

The printed Internal Quotation includes the following SP accounting details automatically — no action required from staff:

Fund	SPO_DCG0001 SPO General Fund
Cost Centre	AQR: SPO_CC0024
Ledger Account	284100: Student-related Expenses
Spend Category	284104SC Student Local Programmes and Activities
Program ID	No Program ID for General Fund
Memo	Nil

Quote Preview

[📧 Print / Save PDF] [✕ Close]

SP FabLab

Department of Academy Quality & Resources
Fablab
500 Dover Road, S13651

INTERNAL PROJECT QUOTATION

Project Ref No: SP-TTC/2026-128

Date: 23-Feb-2026

INTERNAL

CLIENT	JOB TITLE
—	—

DESCRIPTION	QTY	MATERIAL	MACHINE	ITEM TOTAL
Gift Gypsum Powder · Round · 2hr×5	5	$65.00	$0.00	$65.00

Subtotal	$65.00
TOTAL (SGD)	**$65.00**

INTERNAL VIRES — CHARGING DETAILS

Fund	SPO_DCG0001 SPO General Fund
Cost Centre	AQR: SPO_CC0024
Ledger Account	284100: Student-related Expenses
Spend Category	284104SC Student Local Programmes and Activities
Program ID	No Program ID for General Fund
Memo	Nil

This quotation is valid for 30 days from the date of issue. All amounts in Singapore Dollars (SGD).
Internal pricing — SP Surcharge and GST are not applicable for internal vires.
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Figure: Preview of a completed Internal Quotation document

6 External Quotation (Preliminary)

Use this type for jobs commissioned by external clients — companies, government agencies, or members of the public. SP Charge Rate (18.5%) and GST (9%) are applied automatically. The document is titled Preliminary Quotation.

6.1 Line Items & Accessories

These work identically to Internal mode. See Section 5.1 and 5.3 for details. All the same material types and accessories are available.

6.2 Pricing & Surcharges

The following charges are applied automatically once any External quote type is selected:

SP Charge Rate (18.5%)	Shown in the summary and on the printed quotation. This is the client-facing charge rate. Note: 11.5% of this is a TIE administrative charge — see the sidebar note.
GST (9%)	Applied after the SP Charge Rate. Shown as a separate line in the summary and on the quotation.

The sidebar shows a yellow 🔒 TIE charge (11.5%) notice. This is for staff reference only and does NOT appear on the client-facing printed quotation.
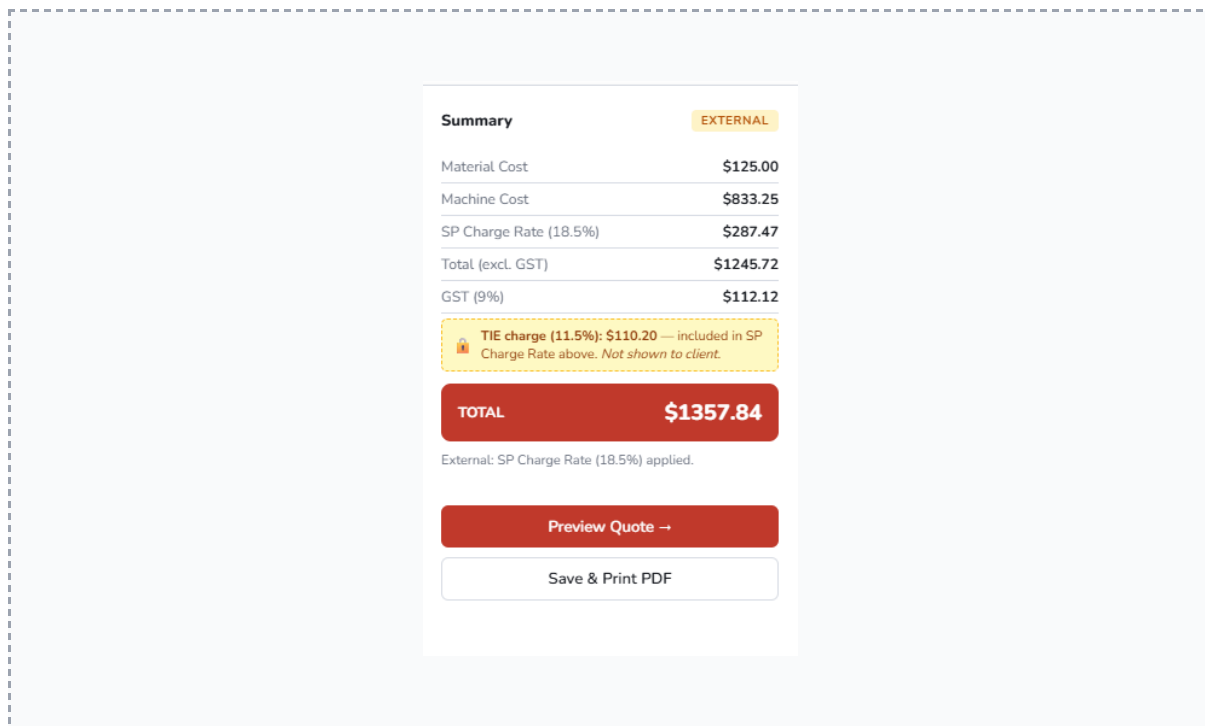

Figure: Summary sidebar showing SP Charge Rate, GST, TIE note, and total for an External quote

6.3 Staff Charges (External only)

Enable the Staff Charges toggle in the Fees & Extras section to include staff labour costs. These are printed on the quotation.

Rate ($/hr)	The hourly rate for the staff member(s) involved.
Hours	Total number of hours worked.
No. of Staff	Number of staff involved. Total = Rate × Hours × No. of Staff.
Leave Taken	Select Yes or No. If Yes, this is noted on the printed quotation.

Figure: Staff Charges toggle enabled — showing Rate, Hours, Staff count, and Leave fields

6.4 Project Expenses (External only)

Enable the Project Expenses toggle to add a lump sum for miscellaneous project costs (e.g. delivery, materials bought externally, printing). Enter an amount and a short description.

Figure: Project Expenses toggle enabled with amount and description filled in

6.5 How Pricing Appears on the Quotation

The printed External Quotation shows:

- A table of all line items with material cost, machine cost, and item total
- Staff charges and project expenses as additional rows (if enabled)
- A totals block showing: Subtotal → SP Charge Rate (18.5%) → Total (excl. GST) → GST (9%) → TOTAL
- A footer note: "SP Charge Rate (18.5%) and GST (9%) are applied to this quotation."

Figure: Preview of a completed External Preliminary Quotation document

7 External Workshop / Course Quotation

Use this type for training workshops or public courses delivered by FabLab. The interface changes to a green theme and a simplified course-based layout. Line items, accessories, Design Fee, and Expedited Work are not available for this type.

Figure: Workshop / Course mode — green section header and Course Details panel

7.1 Workshop Dates

Before adding course details, schedule the workshop dates. Two modes are available:

Continuous (Date Range)	Set a From date and a To date. The duration is calculated automatically (e.g. 5 days). Best for workshops that run on consecutive days.
Specific Dates	Click + Add Date for each session date. Days are counted automatically. Best for workshops with non-consecutive sessions (e.g. once a week).

The workshop dates and total number of days appear on the printed quotation.

Figure: Workshop Dates block — Continuous mode selected with From, To, and Duration fields

Figure: Workshop Dates block — Specific Dates mode with three dates added

7.2 Adding Course Components

Click the course module buttons to add what is covered in the workshop. Each button can only be added once (it greys out after being clicked). The Custom Item button can be added multiple times.

3D CAD	e.g. Basic Fusion | Onshape | Shapr | Blender CAD
3D Printing	e.g. Safety and operational procedure of 3D Printer which includes software operation
Laser Cut	e.g. Safety and operational procedure of Laser cutter which includes software operation
Programming	e.g. Micropython, Vibe programming
Cardboard Sculpt	e.g. Cut and assembly of Cardboard
FabLab Equipment Usage	Listed on the quotation with no detail text — just "Usage of FabLab Equipment"
Custom Item	Enter your own item name and details. Can be added multiple times.

For each added module (except FabLab Equipment Usage), there is a Details field to describe what is covered. The placeholder text shown is a suggested starting point — edit it freely.

> 💡 **Greyed-out buttons**
>
> Once a course button is clicked, it becomes grey and cannot be clicked again. To remove a module, click the red ✕ button on its row — the add button will become active again.

Figure: Course Components — several modules added, with greyed-out buttons

7.3 Overall Course Fee

At the bottom of the Course Details section, enter a single total fee for the entire course. This is the only price field in Workshop / Course mode. You may also add an optional note (e.g. "Inclusive of all materials and instruction").

Figure: Overall Course Fee box with a price and notes entered

7.4 How the Workshop Quotation Looks

The printed Workshop / Course Quotation shows:

- Header titled Workshop / Course Quotation with the ref number and date
- Workshop Dates line showing the date range or specific dates and total days
- A single-column table titled "Course Components Covered" listing each module and its details
- A highlighted green row for the Overall Course Fee
- A totals block: Course Fee → SP Charge Rate (18.5%) → Total (excl. GST) → GST (9%) → TOTAL

Figure: Preview of a completed Workshop / Course Quotation document

8   Fees & Extras

The Fees & Extras section contains optional charges that can be toggled on or off. Some are available for all quote types; others only appear for External and Workshop / Course quotes.

Figure: Fees & Extras section showing all available toggles

8.1 Design Fee (Internal & External)

Applies an additional fee on top of the material and machine subtotal. Toggle it on to reveal the options.

Fee Mode	Percentage: applies a % of the material + machine cost. Fixed Amount: a flat dollar value.
Value	Enter the percentage (default 20%) or the dollar amount.

8.2 Expedited Work (Internal & External)

Applies an urgency surcharge on material and machine costs.

50% — Expedited	Within 2 months
75% — Urgent	Within 1 month
100% — Emergency	Within 2 weeks

8.3 Student Helpers / Agents (Internal & External)

Calculated at $11.00 per hour. Enter the number of helpers and hours per helper. A footnote is added to the printed quotation: "Workmanship based on total time × student rate ($11.00)".
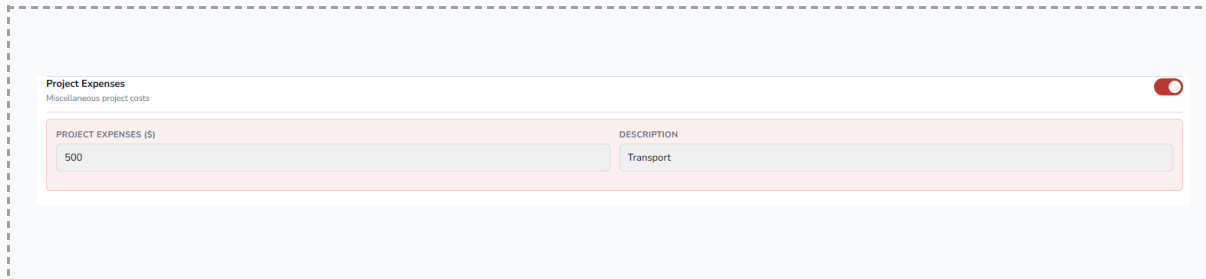
8.4 Staff Charges (External & Workshop only)

For jobs where FabLab staff time must be charged to the client. See Section 6.3 for full details. The total is calculated as: Rate × Hours × No. of Staff.

> *If Leave Taken is set to Yes, this is noted on the printed quotation as part of the staff charges row.*

8.5 Project Expenses (External & Workshop only)

A lump sum for miscellaneous costs. Enter a dollar amount and a short description. This appears as its own row in the printed quotation.
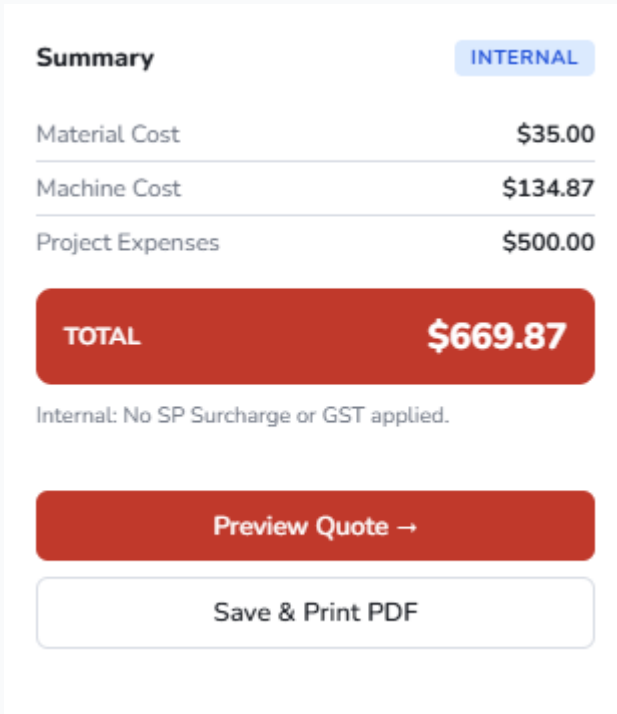
Figure: Staff Charges and Project Expenses toggles — both enabled with values

9   Preview & Print

9.1 Live Summary Sidebar

As you fill in the form, the right-hand sidebar updates in real time showing all cost components and the running total. For External and Workshop quotes, the SP Charge Rate and GST are included. A yellow 🔒 box shows the hidden TIE portion (11.5%) for staff reference — this never appears on the printed document.

Figure: Summary sidebar — Internal mode showing material and machine costs

Figure: Summary sidebar — External mode showing SP Charge Rate, TIE note, GST, and total

9.2 Previewing the Quotation

Click Preview Quote → (sidebar) or ⏻ Preview (header) to open a full preview of the printed document in a pop-up window. Review all details before printing.

Figure: Preview modal showing a formatted quotation document

9.3 Saving and Printing as PDF

Click 💾 Save & Print in the header or the Save & Print PDF button in the sidebar. This does two things simultaneously:

7. Saves the quote to the Quote Log (stored in your browser).
8. Opens the print dialog with the filename pre-filled as: RefNo_ClientName (e.g. SP-TTC-2025-001_Faculty_of_Engineering).

In the print dialog:

•   Set Destination to Save as PDF
•   The suggested filename is already shown — just click Save
•   Choose the correct folder (SharePoint quotation/external or quotation/internal)

> 💡 **Filename convention**
>
> Quotes are named {RefNo}_{ClientName}.pdf and Delivery Orders are named DO_{RefNo}_{ClientName}.pdf. Special characters in the ref number (such as /) are converted to dashes automatically.
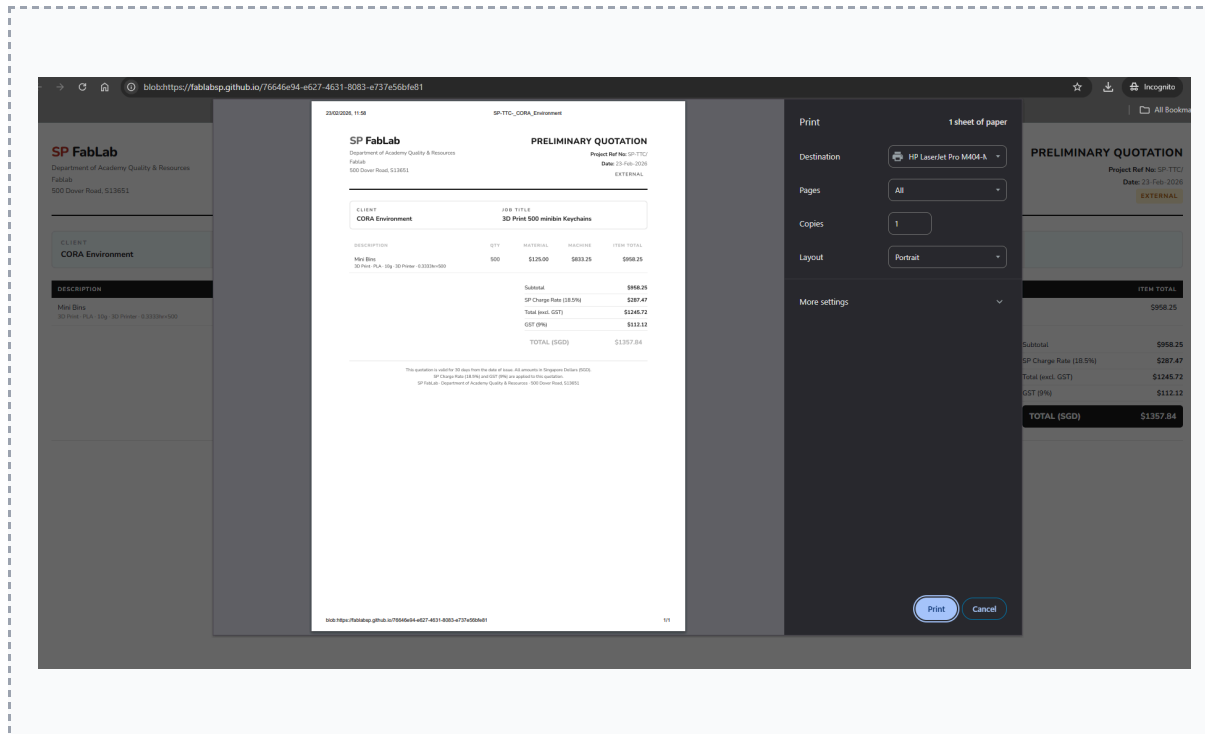
Figure: Browser print dialog — showing Save as PDF option and pre-filled filename

10   Quote Log

The Quote Log tab stores all quotes saved during Save & Print. Quotes are saved in your browser's local storage — they persist across sessions on the same browser but are not shared between computers.
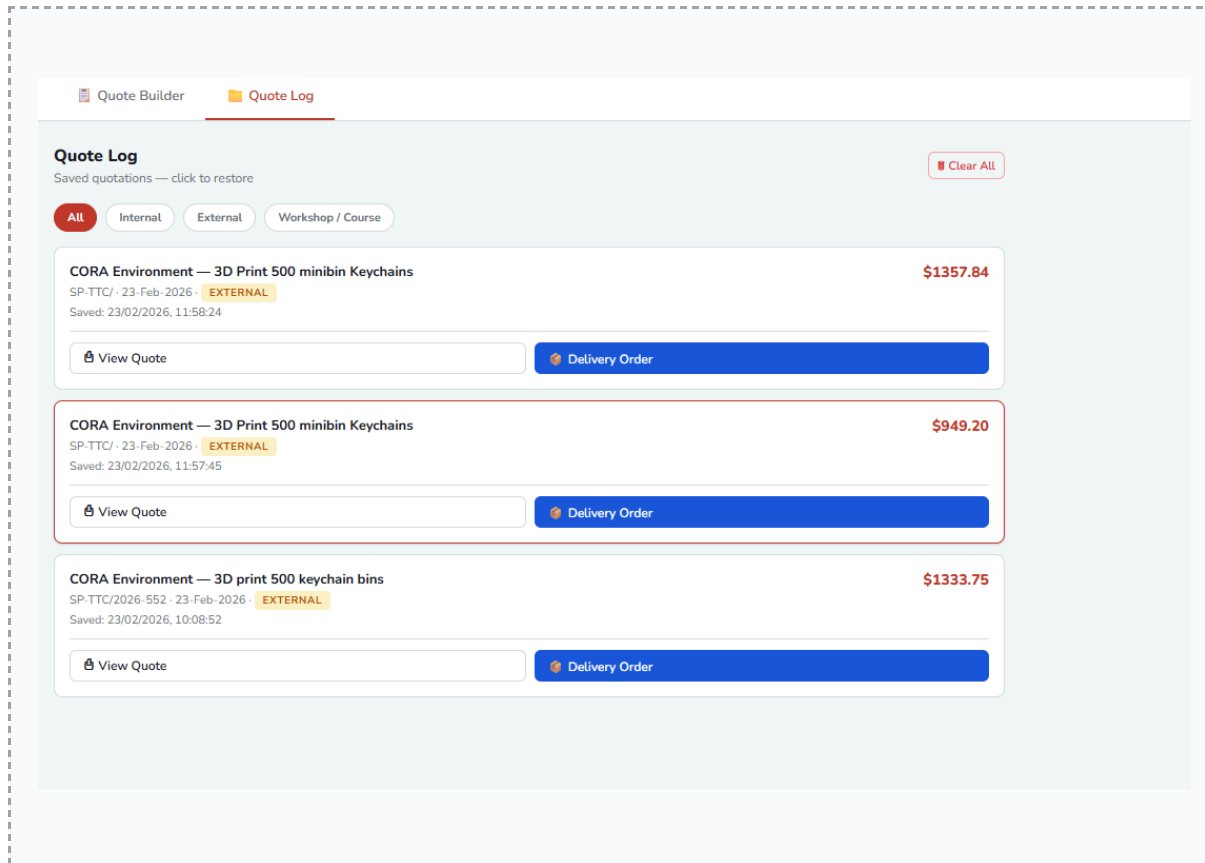
Figure: Quote Log tab showing a list of saved quotations with filter buttons

10.1 Filtering Quotes

Use the filter buttons at the top of the log to show All, Internal, External, or Workshop / Course quotes.

10.2 Restoring a Quote

Click on any saved quote entry to restore all its fields back into the Quote Builder. You can then edit and re-print it. The restored quote appears with all original values including materials, fees, and client details.

10.3 Reprinting a Saved Quote

After restoring a quote, click Save & Print to reprint it. This creates a new log entry with the current timestamp.

> *Clearing the browser cache or using a different browser will remove all saved quotes from the log. Save a PDF copy of each quotation for your official records.*

10.4 Clearing the Log

Click the 🗑 Clear All button to remove all saved quotes. A confirmation prompt will appear. This action cannot be undone.

11   Delivery Order (DO)

A Delivery Order can be generated from any saved quote in the Quote Log. It lists all items without pricing, and includes a client signature block for acknowledgement of receipt.

11.1 Generating a DO

9. Go to the Quote Log tab.

10. Find the quote you want to generate a DO for.

11. Click the Generate DO button on that entry.

12. A print dialog will open with the filename pre-filled as DO_{RefNo}_{ClientName}.

13. Save as PDF in the same way as a quotation.
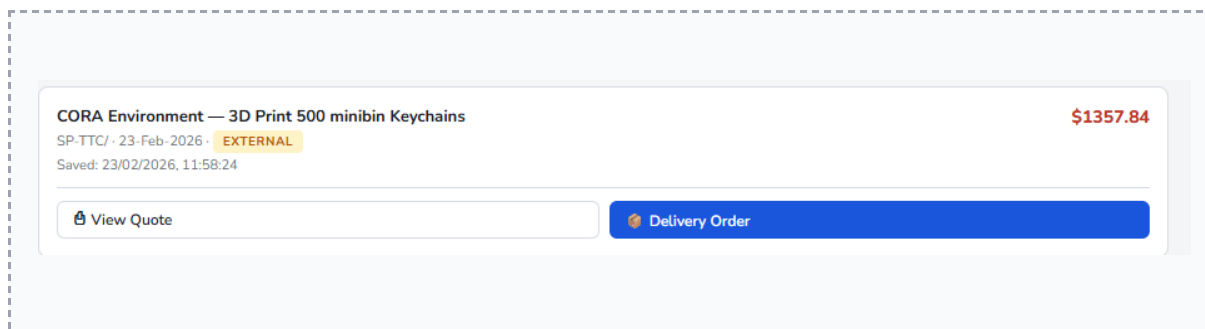
Figure: Quote Log entry showing the Generate DO button

11.2 What the DO Contains

The Delivery Order includes:

•   SP FabLab header and DO reference number

•   Client name, job title, and date

•   A notice: "Please inspect all items before signing"

•   An items table with Description and Quantity — no pricing

•   A "Condition Checked" column for the client to mark each item

•   A signature block: Full Name, Signature, Date Received

Figure: Preview of a completed Delivery Order document

12   Tips & Best Practices

12.1 General

- Always click Preview Quote before printing to check for errors.
- Use the Reset button (↺) to clear all fields and start a fresh quote. You will be prompted to confirm.
- The tool works offline — no internet is needed once the file is open.
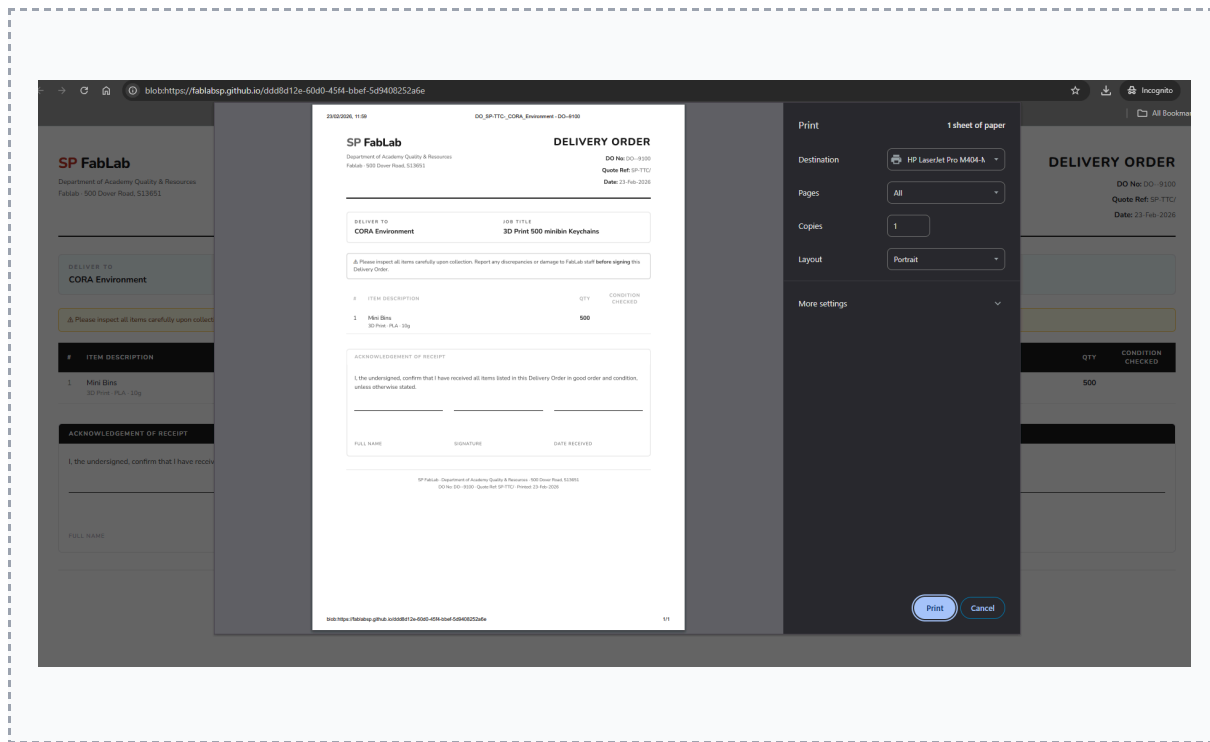- Quotes are stored in your browser. Use a consistent browser (e.g. Chrome) on your work computer to maintain the log.

12.2 Naming Conventions

The tool generates filenames automatically. The format is:

Quotation	`SP-TTC-2025-001_Faculty_of_Engineering.pdf`
Delivery Order	`DO_SP-TTC-2025-001_Faculty_of_Engineering.pdf`

12.3 Sharing Quotes with Clients

- Save the PDF to SharePoint in the appropriate folder (quotation/external or quotation/internal).
- Never share the raw HTML file with clients — always share the saved PDF.
- The printed quotation is client-ready. The TIE charge note and internal vires details are either hidden or only shown for the relevant quote type.

12.4 Common Mistakes to Avoid

Wrong quote type selected	Double-check the Quote Type radio button. Switching type will hide/show different sections and change pricing.
Machine hours left at 0	For laser and cardboard jobs, ensure you enter the hours per item — machine cost will be $0 otherwise.
Printing before saving	Use Save & Print rather than the browser's Ctrl+P. This ensures the quote is logged and the filename is pre-filled correctly.
Quote Log on a different PC	The log is browser-local. Always use the same browser and computer, or save PDFs as your primary records.

12.5 When to Use Each Quote Type

Student FYP / CCA project	Internal
School department request	Internal

Company prototype order	External
Government agency project	External
Public STEM workshop	External Workshop / Course
Corporate training session	External Workshop / Course

SP FabLab

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