

Capstone project 2025 - Campus printer supply system



So i have to make this stupid presentation for my class here is a link the site with more information :

<https://www.berea.edu/academics/departments-programs/chemistry/chm-department-pages/undergraduate-research-symposium#h-buris-registration>

can you help me write a good compelling title and abstract for this using what i am working on

Got you. Here are strong options that fit a cross-disciplinary audience and your actual build.

Title options

1. QR Driven Print Supply and Asset Management for a Campus Fleet
2. Closing the Loop on Printer Supplies with Django, PostgreSQL, and QR Codes
3. A Low Cost Inventory and Ordering System for 170 plus Campus Printers
4. From Paper Jams to Data Flows, Building a Maintainable Print Fleet Platform

Abstract

Campus printing often suffers from opaque inventory, slow toner replacement, and scattered maintenance notes. I designed and implemented a full-stack system that tracks supplies and devices across more than 170 printers and MFPs, links each asset to a scannable QR code, and routes authenticated orders to the right workflow. The platform uses Django and PostgreSQL for a normalized data model of devices, consumables, locations, and transfer logs, plus an admin experience customized for nontechnical staff. Students and staff can scan a QR sticker on a device to submit supply requests, report issues, or view device details; each action creates time-stamped records for accountability and trend analysis. I integrated PaperCut-based identifiers where available, standardized toner SKUs to reduce ordering errors, and added comment trails with user and time stamps for service history. Early campus trials show faster supply fulfillment, fewer mismatched cartridges, and clearer visibility into stock movement between buildings. I will present the data model, QR workflow, admin customizations, and lessons learned in converting ad hoc spreadsheets into a maintainable system that reduces downtime and operational overhead while remaining cost-conscious and deployable by small IT teams.

If you plan a poster, BURIS welcomes posters from many fields and uses a 4-foot by 3-foot format, with oral talks at 12 to 15 minutes, so the abstract above is pitched for a general audience and a poster session. [Berea College](#)

Want me to tailor this to an oral talk version too, or swap in specific toner SKUs and a short demo flow?



a couple of things to change i want a shorter title thats a little more concise and i am also working with a different solution instead of PostgreSQL i am implementing everything in the

site itself without the need for outside resources or programs so you will have to change the abstract to reflect that

Got it. Here are tighter titles and a revised abstract that removes PostgreSQL and emphasizes an all-in-one, self-contained site.

Concise title options

1. QR Print Fleet Manager
2. QR Supply and Service for Campus Printers
3. One Site, Many Printers: QR Inventory
4. Scan to Restock, Scan to Repair
5. Campus Printer Manager with QR

Abstract (self-contained build)

Campus printing breaks down when supplies, service notes, and device details live in separate places. I built a single, self-contained web application that manages inventory, service history, and supply requests for more than 170 campus printers without external databases or add-on services. The app uses a unified data model inside the site, QR codes on each device, and role-aware views for student workers and staff. Scanning a sticker opens the device page to submit a toner request, report an issue, or view key details. Each action is stored with timestamps and user info, creating a reliable trail for audits and trend tracking. The admin interface is customized for quick edits, bulk transfers between locations, and standardized consumable SKUs to prevent mismatches. Early results show faster fulfillment and fewer errors while keeping deployment simple, since everything runs from a single site package. I will share the data model, QR workflow, admin customizations, and lessons learned converting scattered spreadsheets into a maintainable platform that reduces downtime and support load.



okay i like the abstract except for the section from early results to the end as i have yet to actually get any results i am still building the platform

Got it, Zeke. Here's a clean version with the "results" language removed and framed as in progress.

Title options

1. QR Print Fleet Manager
2. QR Supply and Service for Campus Printers
3. Scan to Restock, Scan to Repair

Abstract

Campus printing breaks down when supplies, service notes, and device details live in separate places. I am building a single, self-contained web application that manages inventory, service history, and supply

requests for more than 170 campus printers without external databases or add-on services. The app uses a unified data model inside the site, QR codes on each device, and role-aware views for student workers and staff. Scanning a sticker opens the device page to submit a toner request, report an issue, or view key details. Each action is stored with timestamps and user info, creating a reliable trail for audits and trend tracking. The admin interface is customized for quick edits, bulk transfers between locations, and standardized consumable SKUs to prevent mismatches. This presentation outlines the current architecture, QR workflow, and admin customizations, along with the roadmap for testing, metrics to evaluate fulfillment speed and error rates, and planned steps to move from prototype to campus-wide deployment.



thank you and a question about the requirements will i need a poster and do an oral presentation or is just one or the other the site doesn't make that very clear

Short answer: you pick one format. You don't have to do both.

The BURIS page says the symposium includes both talks and posters. Talks are 12–15 minutes plus 5 minutes for Q&A/transition, and posters are 4-ft by 3-ft single-page prints. That's presented as two separate presentation types, not a combined requirement to do both. Registration notes the same details without saying you must present in both formats, which implies you choose your format during registration. [Berea College](#) [Berea College](#)

Key details for this year:

- Event date: Friday, October 17, 2025
- Registration deadline: Friday, October 10, 2025
- Concurrent sessions: posters 2:30–4:30 pm, oral sessions from ~2:40 pm, then a plenary at 5:10 pm.

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Given you're still building, a poster is usually the lower-risk option for "work in progress," and it lets you focus on architecture and planned evaluation. If you want live demo time and a narrative, pick the oral slot.



okay i have now received more information on the poster requirements can you help me design a poster it needs to be 4 feet by 3 feet with the abstract in the upper left hand corner

Sweet, I built you a one-slide 48×36 inch poster with the abstract in the upper-left and clear sections for everything else.

[Download the PowerPoint](#)

What's inside

- Title bar with your name and course
- Abstract placed upper left, as requested
- Sections: Background and Motivation, System Architecture, QR Workflow, Admin Customizations, Roadmap and Evaluation Plan

- A light “diagram placeholder” box for your ER/data model or screenshots
- Footer with contact line you can edit

If you want a different title from the options or want me to swap fonts, colors, or move sections around, tell me and I will update the file.



for the section of background a motivation can you change it to bullet points and make it a little better to read it feel off for some reason here is the text i will just copy and paste it back into it :
Fragmented spreadsheets and ad hoc emails slow fulfillment and hide trends.
Multiple printer vendors and SKUs increase ordering mistakes.
Staff and students need a fast, low-friction way to request supplies or log issues.
A single site reduces overhead and simplifies deployment for small IT teams.

Done. I rebuilt the poster and rewrote that section as cleaner bullets.

Updated line set:

- Disconnected spreadsheets and email threads delay fulfillment and obscure patterns.
- Mixed vendors and SKU naming increase ordering mistakes and returns.
- Students and staff need a quick, low friction way to request supplies and report issues.
- One self-contained site centralizes data, cuts overhead, and is easier to deploy and support for small IT teams.

Grab the updated file here:

[Download the PowerPoint](#)

Want me to swap in your logo, college colors, or a small QR code on the title bar that goes to a demo page?



you have an admin customizations section but i dont feel like it acurately describes the project
can you change that to something else and let me copy and paste it

Totally. Here are two drop-in replacements. Pick one and paste it over that section.

Core Features

- Device pages opened by QR, with actions for Request Toner, Report Issue, and View Details
- Unified models for devices, consumables, locations, transfers, and comment history
- Standardized toner and waste bottle SKUs to prevent mismatches and returns
- Submission flows that auto stamp user identity and time for reliable audit trails
- Bulk inventory transfers and count adjustments across rooms and buildings
- Search and filters to find devices by model, location, or supply status
- Exportable logs for ordering, service history, and stock movement

Implementation Highlights

- Self contained web app, no external database or third party services required
- Role aware views for student workers, staff, and admin, each with focused tasks
- QR endpoints per device that deep link into the exact action page
- Data validation on SKUs, locations, and device records to reduce errors
- Clean list views with quick edit patterns to speed up common changes
- Simple deploy, single site package with minimal setup for small IT teams