

The Physics Educational Laboratory

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**UNIVERSITY OF
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Overview

- Wes' Stuff
- Zain's Stuff
- Collaborative Lab Development Platform

Collaborative Development Platform

Goal: To build a collaborative development platform that will aid the department as it works towards creating, and maintaining, a modern laboratory experience for it's students.

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 - ▶ Outlines timelines for development
 - ▶ Outlines quality control implementation

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- Physics Educational Laboratory Information Hub (2018)

The Original Problems

- Educational laboratory resources are restricted, disorganized, and disappearing from memory.
- Significant risk that a significant amount of intellectual resources could be lost permanently.
- Limited physical storage space.

The Solutions

- Organized Lab Documents - Archive.
- Department Wide Access to Information.
- Transferable Knowledge.
- Platform for Collaboration.
- Foundation for Future Development.
- Room to Grow.
- Tools for Ease of Upkeep.
- Mobile friendly.

Use Cases

► New Education Labs Website

Developing a new Experiment

- Download templates.
- Build new experiment.
- Save papers used in development.
- Save sample data.
- List relevant disciplines and topics.
- List equipment.
- Drafts go through the quality control processes.
- Final product is added to repository.
- Experiment is now available for next developer.

Keeping it Relevant

- Built with popular languages (javascript, html, xml, python, css, php).
- Built back-end tools for updating and validating?
- Requires buy in from all stakeholders?
- Requires that documents are added before the lab runs?

Future Work

- Continue to populate disciplines and topics.
- Administration manual.
- Host simulations.
- Host demonstrations.