Lake Washington Institute of Technology™
LWTech.edu

Creation and Modernization of Technological Education in **Electronics** and **Welding** through **Open Educational Resources** that are Free to Share, Use, and Revise.

Background: This NSF ATE project is beginning year 3 of activity and will redesign instruction to better train a diverse group of students to meet critical workforce demands in the areas of Electronics and Welding. The redesign will transition all course materials for 6 courses to Open Educational Resources (OER) that are accessible and freely available for reuse and revision.

What are Open Educational Resources (OER)?

Any teaching or learning materials that are:

- in the **public domain** (not copyrighted) or
- have been **openly licensed** so that the public has permission to retain, reuse, redistribute, and often to revise and remix as well.
- An OER can be a…
  - Textbook
  - Entire Course
  - Slideshow
  - Quiz
  - Assignment
  - Image
  - Video
  - Figure
  - Simulation
  - Syllabus
  - Lesson Plan

It doesn't have to be digital!

Creating Community through Peer Review

- Use of OER fosters sharing and collaboration
- Ensures a variety of backgrounds and perspectives are represented
- Internal and external faculty reviewers
- Industry review during advisory board meetings using simplified form

OER in Advanced Technology

- OER has existed for ~20 years
- Only now have advanced technology fields begun to incorporate it in instruction

OER Course Public Links:

- WELD 203 – Layout and Fabrication Techniques
- WELD 205 – Advanced Pipe Welding
- WELD 103/104 – Wire Feed Welding
- ELCT 132 – Printed Circuit Board Layout and Design
- ELCT 241 – Introduction to Industrial Automation
- ELCT 251 – Introduction to Microprocessors and Microcontrollers

By September 2024, all above courses will be available as OER on Canvas Commons.

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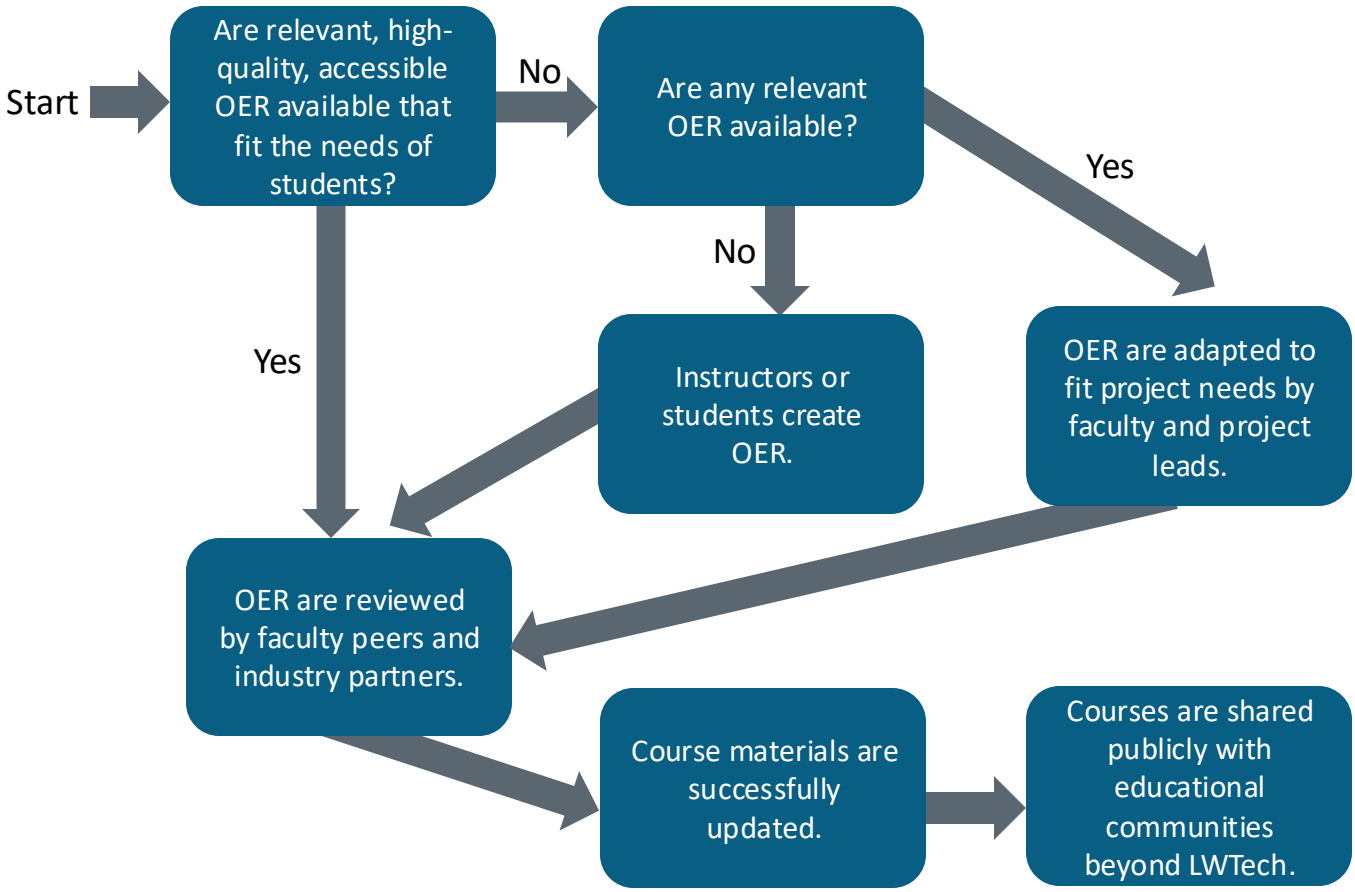
OPEN for LEARNING

Basic Process of OER Implementation



Benefits and Challenges of OER

BENEFITS

What surveyed LWTech STEM Students and Faculty say they **like** about OER:

- Free of Cost
- Ease of Access
- High Quality
- Customizable
- Variety of Sources
- Easy to Use
- Kept Up-to-date
- EDI

CHALLENGES

What surveyed LWTech STEM Students and Faculty say they **don't like** about OER:

- Low Quality
- Prefer physical book
- Having to find/make/customize materials
- Difficulty of online reading
- Tech issues

Scan me!

Interested in becoming a reviewer or course material contributor?

We are looking for instructors who are willing to provide feedback and/or contribute materials that can be openly licensed.

Contact Us! Katherine.Kelley@lwtech.edu and Priyanka.Pant@lwtech.edu