Open Educational Resources

Terra CREATE Project Team

Presented by:

Tom Wylie, Northwest State CC, Archbold, OH
(twylie@northweststate.edu)

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What is OER?

1. Open Educational Resources
2. Free material that can be used for instruction
3. Some Faculty replace textbooks with OER
4. Some Faculty use OER in addition to the textbook
5. Most OER can be modified and reused
6. All materials funded through federal agencies (DOL, NSF, DOE) is considered OER and can be used based on the licensing

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What are Learning Objects

1. Passive Learning versus Active Learning

2. Active Learning Objects are: Video, Voice over PPT, & Simulations

3. Targeted Learning Objects are PDFs to focus on a topic area, or even a video on how to do something

4. Hands-on students learn best with videos or a simulations, but also learn with a targeted learning object

5. Study guides and quizzes/tests are learning object

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URLs Used in OER Workshop:

Engineertech.org: Eastern Iowa CC Videos on Technical Topics
http://engineertech.org/

Wisconsin Online Learning Object:
https://www.wisc-online.com/

The DOL document repository:
www.skillscommons.org

The NSF ATE document repository:
www.atecentral.net

Jim Pytel, Big Bad Tech, Video Lectures with Graphics
https://www.youtube.com/user/bigbadtech

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Attribution: Giving Appropriate Credit

This document was originally created by Northwest State Community College through DOL funding with TAACCCT Round 4. The author and Creative Commons licensing can be found at the following link: http://www.skillscommons.org/handle/taaccct/17746. The original material was modified to meet the needs of Terra Community College.

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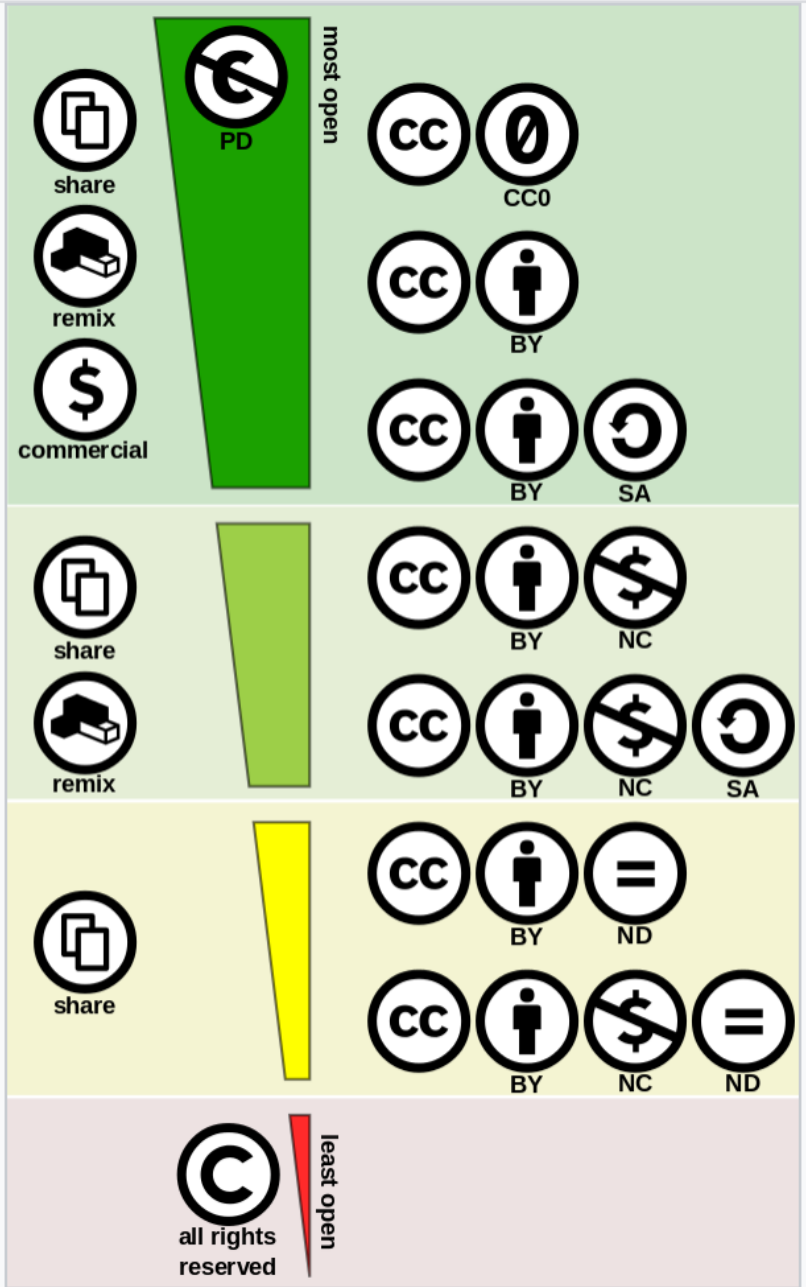
Remix: means to add, delete, modify the original OER for reuse:

A **Commercial** license does allow a user to remix and modify, but they can also resell it.

Non-Commercial license does not allow a user to resell the OER, but they can still use it, modify it, and share it.

This link explains all the licenses:
https://creativecommons.org/about/cclicenses/



Creative commons license spectrum between public domain (top) and all rights reserved (bottom). Left side indicates the use-cases allowed, right side

WiscOnline Licensing

About

The WiscOnline Story

Our Mission

The Team

Learning Objects

API

Help

Technical Support

FAQ

Accessibility Statement

Contact/Follow

Contact

Translate Our Content

Follow

Terms of Use | Badges | Privacy Policy

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Referencing Original Work in OER

Video: Piping and Instrumentation Diagrams

http://engineertech.org/courses/process-control/?submit=view&vimeography_gallery=46&vimeography_video=135569941

This video was created by Eastern Iowa Community College in TAACCCT Round 2. The link to the licensing information can be found at:
http://www.skillscommons.org/handle/taaccct/10039

Simulation: Proportional Control Amplifier

https://www.wisc-online.com/learn/technical/industrial-automation/iau12008/proportional-control-amplifier

This learning object is linked from Wisc-Online (Wisconsin-Online), a nonprofit educational website. Fox Valley Technical College maintains fiscal and operational responsibility for Wisc-Online with guidance from an advisory council that includes representation from all of the colleges in the Wisconsin Technical College System. For a link to the page with the Creative Commons licensing information, copy the following link into an internet browser:
https://www.wisc-online.com/our-story

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www.atecentral.net

Jim Pytel, Big Bad Tech, Video Lectures with Graphics
https://www.youtube.com/user/bigbadtech

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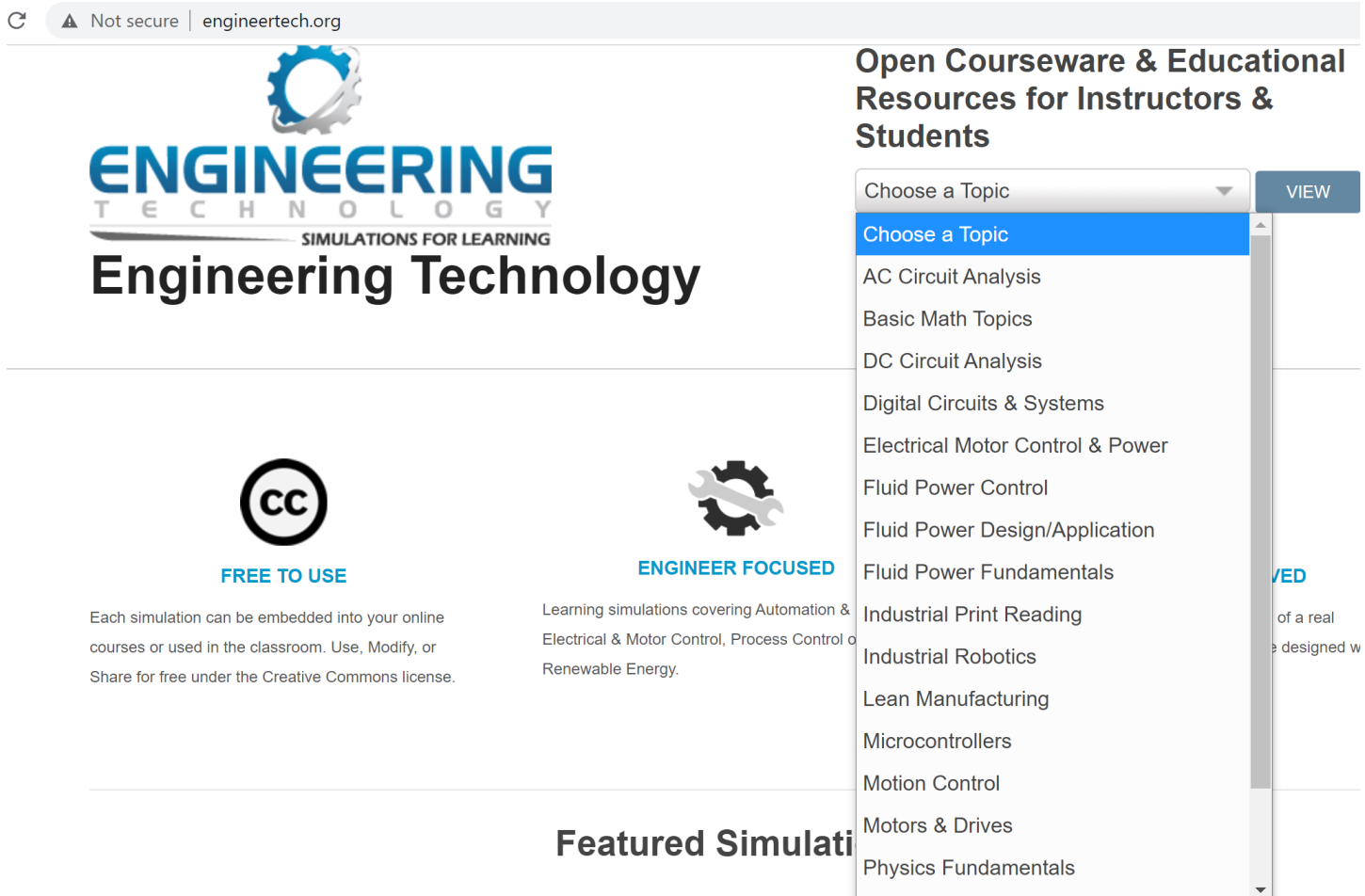
ENGINEERTECH.ORG:

ENGINEERTECH.ORG is a website created to house videos created by Eastern Iowa Community College with funds from TAACCCT Round 2 grant. This is the user interface to the videos that are housed at VIMEO.COM (instead of YouTube). A college LMS can link to each video. The MP4 videos can also be downloaded from Skillscommons. The link to the CC license can also be found at Skillscommons.



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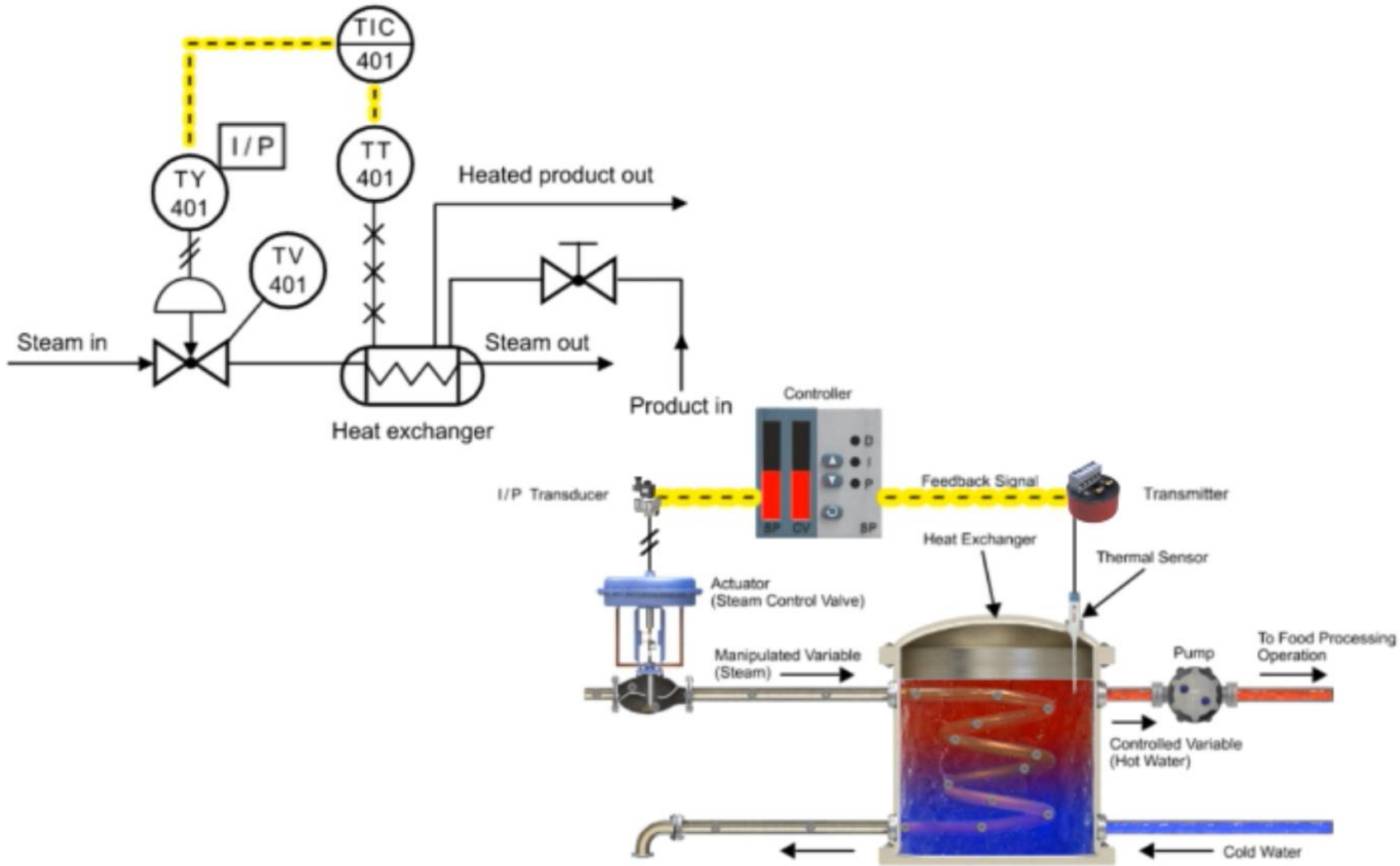
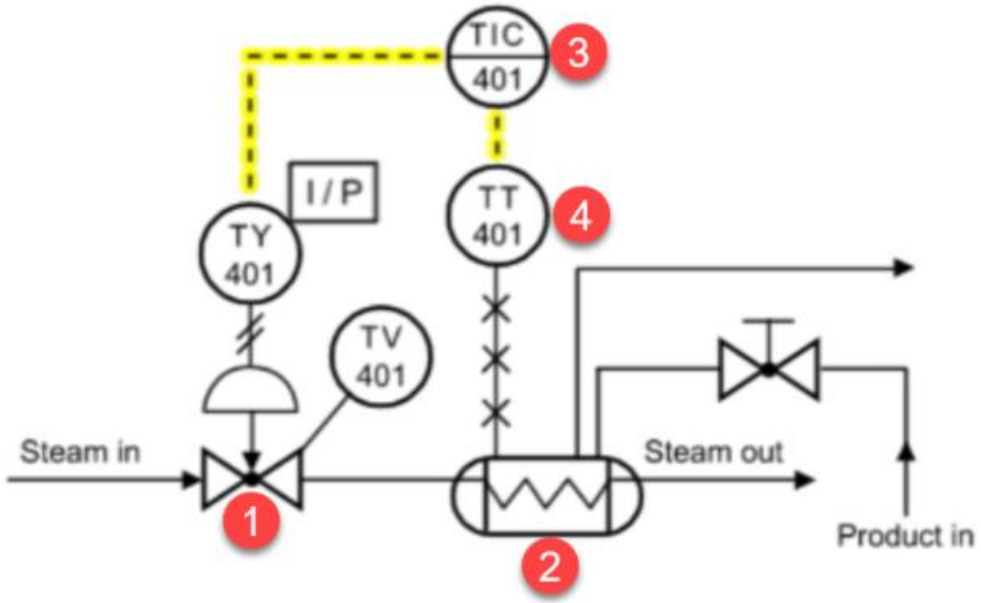
Piping and Instrumentation Diagrams



Download Embeddable Simulation with Interactive Quiz Questions:
bit.ly/1IspWI8

Assess the students on information within Learning Object



2. In this Piping & Instrument Diagram, which device is the heat exchanger?

a. 1
b. 2
c. 3
d. 4

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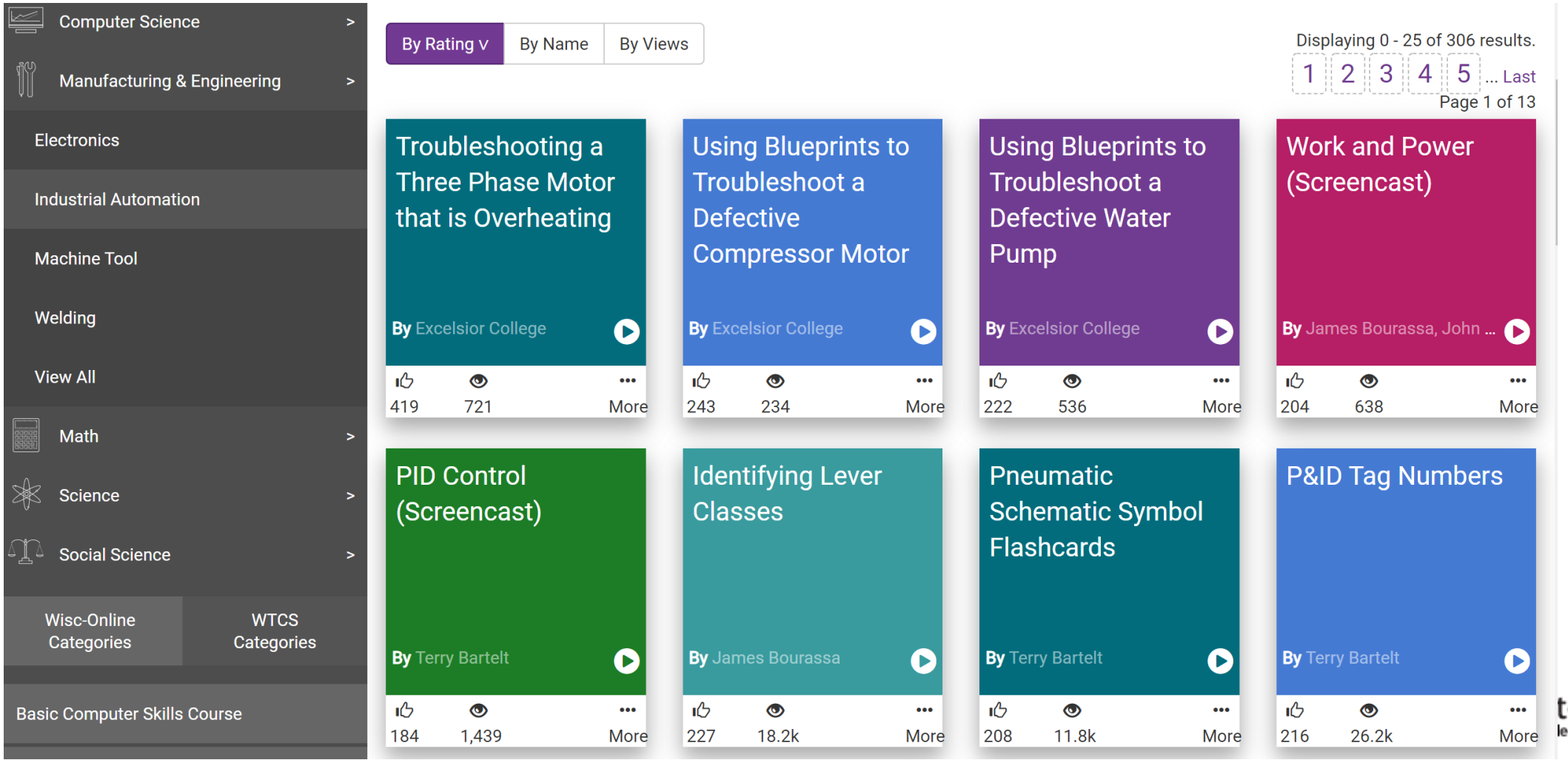
WISC-ONLINE:

WISC-ONLINE is an online repository for active learning objects that is accessible by going to their website: https://www.wisc-online.com/, and searching for a topic, or look into categories. These links can be posted in an LMS system for students to view on a computer or on their portable devices.

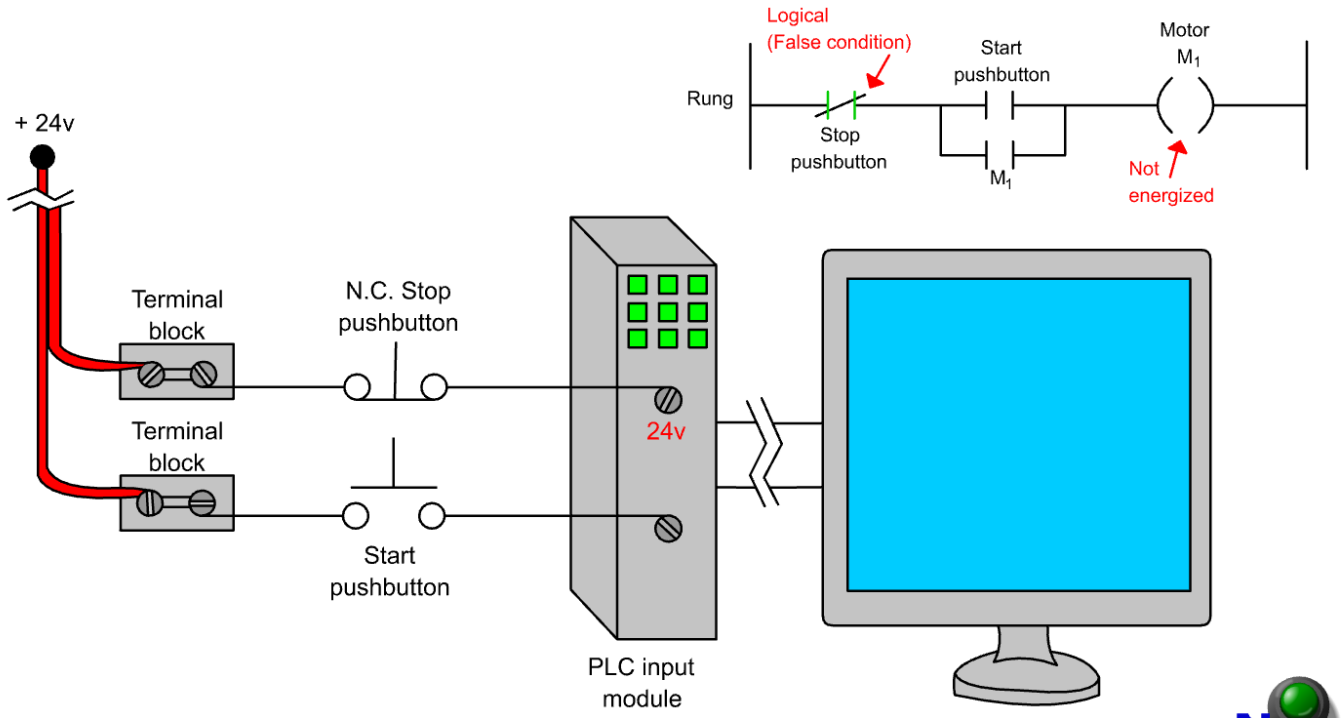


WISC-ONLINE:

Stop-Button Wiring to a PLC

Using a Normally Closed Switch and an Examine-Off Contact

There is a common mistake made by PLC programming beginners. They incorrectly wire a normally closed pushbutton to perform the stop function, and then program an Examine-Off contact on the PLC ladder diagram that corresponds to the pushbutton.



WISC-ONLINE:

Narration

Calculating Horsepower, RPM & Torque

Page 15 of 17

Horsepower Calculation Problems

Calculate Horsepower

Torque	RPM	Horsepower
2352.9 ft-oz	198	0

Round to the tenth decimal place.

Reference Window

Check Answer

BACK

NEXT

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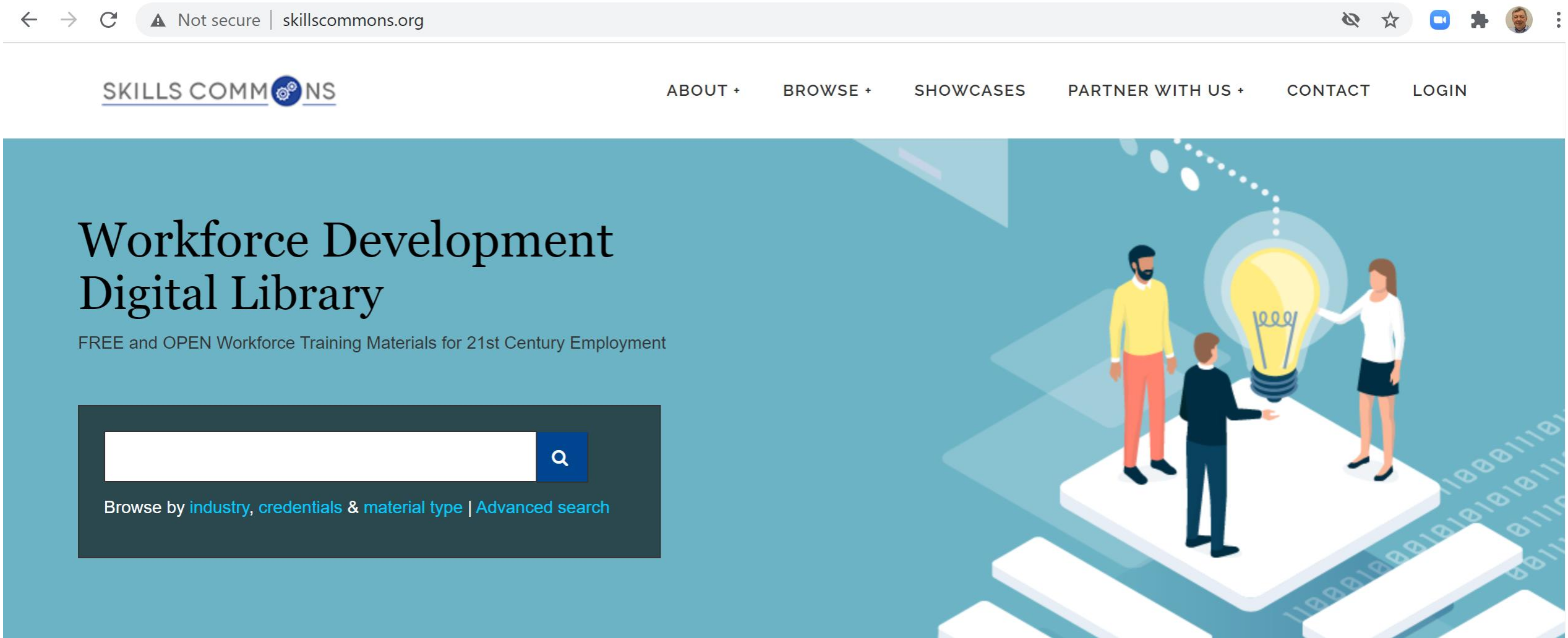
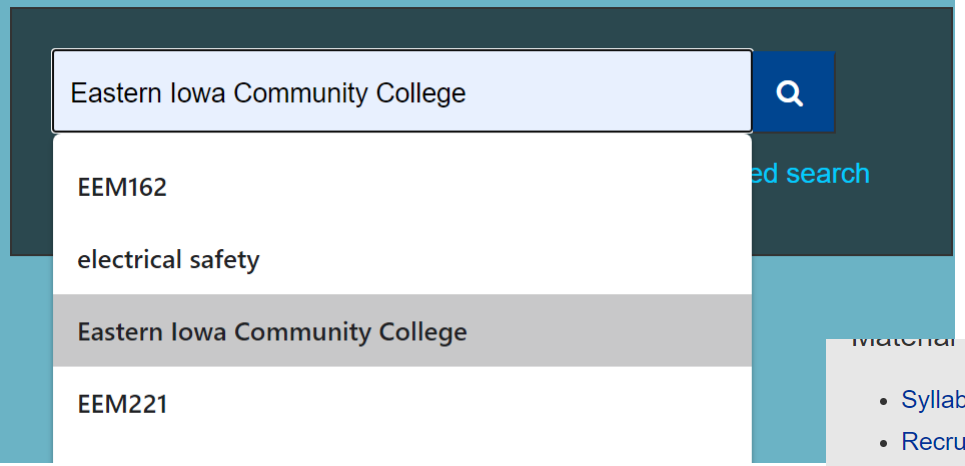
SKILLSCOMMONS.ORG:

SKILLSCOMMONS.ORG is a website created to house the instructional content that was developed with DOL dollars, especially materials developed in the TAACCCT grant project. There are thousands of learning objects that are stored there. A person can spend hours searching within their site. A search can be done on a person, college or technical content topic. All of the licensing information is stored with the object.





All the videos Eastern Iowa Community College has at ENGINEERTECH.ORG, housed by VIMEO, is stored as MP4s in Skillscommons.

These MP4 videos can be uploaded to an LMS system, or could be put on YouTube.

Some colleges are loading MP4s into the LMS, stored on their own servers so they can monitor when a student opens the learning object, and to assure that only their registered students can get to it.

These MP4s can also be edited in Camtasia to add or move content.

Material Type

- Syllabus (2637)
- Recruitment and Outreach (1551)
- Hybrid/Blended Course (1343)
- Presentation (1314)
- Grant Management Materials (1246)
- Collection (1214)
- Student Support Materials (1125)
- Assignment (1121)
- Reference Material (1096)
- Instructor and/or Advisor/Case Manager Support Materials (846)
- ... View More

Credential Type

- Certificate (6496)
- Associate Degree (5885)
- Stacked/Latticed Credential Model (2900)
- None (2284)
- Credential (1563)
- Other (1051)
- Diploma (982)
- Bachelors Degree (325)
- ||| (5)

Timer Functions On/Off Delays in PLCs preview

Simulation

Eastern Iowa Community College

This narrated animation illustrates timer functions on/off delays in PLCs.

NPN Transistors preview

Simulation

Eastern Iowa Community College

This narrated animation illustrates the operation and functions of NPN transistors.

Pressure Relief Valves preview

Simulation

Eastern Iowa Community College

This narrated animation illustrates the principles and operations of pressure relief valves.

Hydrostatic Pressure in Process Control preview

Simulation

Eastern Iowa Community College

This narrated animation illustrates hydrostatic pressure issues in process control.

The Law of Gravity - Fundamental Physics preview

Simulation

Eastern Iowa Community College

This narrated animation illustrates the Law of Gravity.

Not secure | skillscommons.org/handle/taaccct/10087

Link to video in EngineerTech.org

SKILLS COMMONS ABOUT + BROWSE + SHOWCASES

Home > Pathways to Engineering Technology Careers (PETC) > Learning Resources Collection > View Item

Piping and Instrumentation

Hunter, Tim

This narrated animation illustrates piping and instrumentation associated with process control.

Raw MP4 that can be edited

This narrated animation describes the principles associated with Piping and Instrumentation associated with Process Control. (8 MB)

This guide describes how to reach the 508 accessibility transcript and how to include the power concept into one's courseware. (1 MB)

Did you download this item? We value your feedback, and it'll only take a minute

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Hide Statistical Information

Total hits all time

File downloads

Additional Public Access To Materials:
http://www.engineertech.org/

Website for links to all of the Eastern Iowa CC videos

The user can search by the Author of the materials in Skillscommons, or the organization, or the topic area.

tom wylie search

Advanced search

Has preview

preview

Industry

- Manufacturing -- Miscellaneous Manufacturing (339) (14)
- Developmental Education (6)
- Manufacturing -- Plastics and Rubber Products Manufacturing (326) (6)
- Information Technology -- Computer Operating Systems (Programming), Digital Forensics, Cyber Security, Network Security, IT Security (51) (3)
- Manufacturing -- Miscellaneous Manufacturing -- Other Miscellaneous Manufacturing (3399) (3)
- Administrative and Support and Waste Management and Remediation Services -- Waste Management and Remediation Services

Results **1-10** of **46**

sort by: **relevance** | newest f

Servo and Robotics

Hybrid/Blended Course

Northeast State Community College

Servo/Robotics Systems is an introductory Hybrid course in industrial robotics with emphasis on the Fanuc R-J30iA series robot controller. The course is intended for students who wish to gain insight into robot operations in order to program, test, run, and trouble-shoot FANUC material handling appl . . .

Industrial Electricity II

Hybrid/Blended Course

Northwest State Community College

The purpose of this course is to develop the student's knowledge and skills in the area of electrical safety, DC/AC machines and basic control circuits. The electrical safety module will focus on lockout/tagout, arc-flash standards, PPE, electrical panels and overcurrent protection. The DC/AC machin . . .

Industrial Wiring

Hybrid/Blended Course

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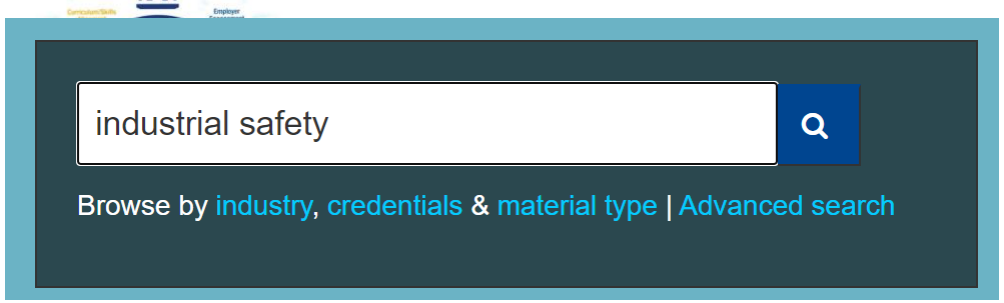


In this example the user can search for any topic on Industrial Safety.

preview

Industry

- Manufacturing -- Miscellaneous Manufacturing (339) (472)
- Developmental Education (460)
- Information Technology -- Computer Operating Systems (Programming), Digital Forensics, Cyber Security, Network Security, IT Security (51) (328)
- Health Care and Social Assistance (62) (241)
- Professional, Scientific, and Technical Services (54) (207)
- Professional, Scientific, and Technical Services -- Professional, Scientific, and Technical Services (541) (202)
- Manufacturing -- Fabricated Metal Product Manufacturing (332) (138)
- Mining, Quarrying, and Oil and Gas Extraction -- Oil and Gas Extraction -- Oil and Gas Extraction (2111) (137)
- Manufacturing -- Miscellaneous Manufacturing -- Other Miscellaneous Manufacturing (3399) (132)
- Construction (23) (125)
- ... View More

Machine Shop Safety Challenge Test

Student Support Materials

Front Range Community College

Challenge test for machine shop safety

Ohio TechNet SAFE 145 Safety in General Industry

Other

Lorain County Community College

These are course materials for OSHA Safety in General Industry 30 Hour

EIC 103 Safety & Industry Certificate

Hybrid/Blended Course

Trinidad State Junior College

This course cartridge contains material to teach EIC 103 Safety & Industry Certificate including materials for a comprehensive review of electrical industry safety standards. When applicable, the student will earn a permit and/or certification in the following areas: CDL Licensing, First Aid/CPR/AED . . .

Ohio TechNet LCCC_Safety

Recruitment and Outreach

Lorain County Community College

These are outreach materials for the LCCC Safety program and courses, and one LCCC Curriculum Guide for the 2 year Associate Degree.

Industrial Safety Syllabus

Syllabus

ZIPPED Files in Skillcommons.org

Many objects (files) are zipped within Skills Commons, thus they can be retrieved easily and added to a course within your unique LMS.
NSCC objects are all in their native format: Word, PPT, MP4.

Programmable Controls I

Wylie, Tom

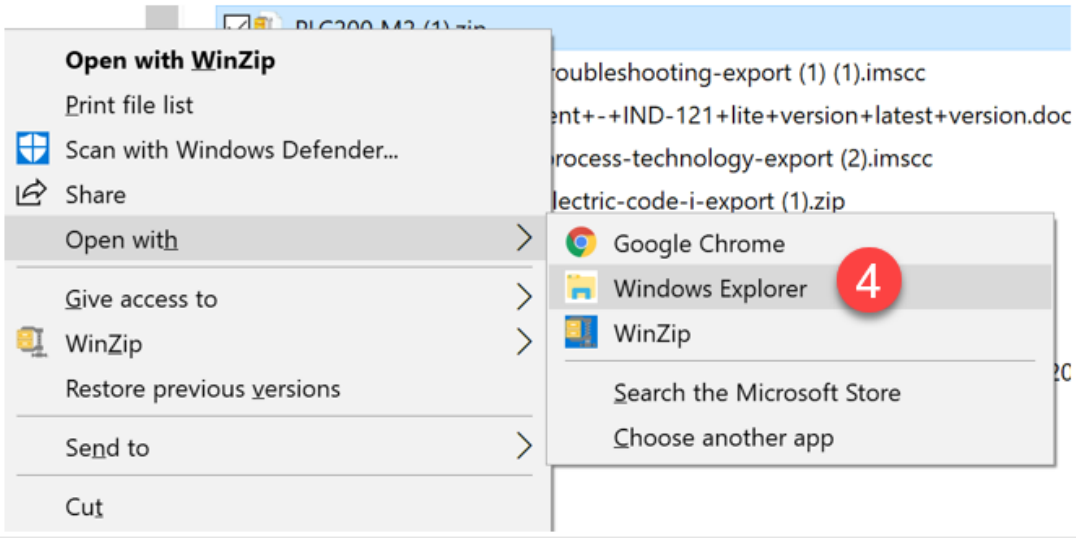
1

The course is a study of the installation, programming and troubleshooting of programmable controlled systems currently used in an industrial environment. The focus will be on Installation, Programming, Engineering and Maintenance tasks performed with PLC systems. The primary PLC used for this class will be the Allen Bradley SLC-500 and CompactLogix, using RSLogix 500, RSLogix5000 and RSLinx software. The topics presented will be learned through Online instructional material, and hands on labs. After completing this course the student will: 1. Explain the function of a PLC in an industrial environment 2. Set up communications between a PLC and a programming panel 3. Configure and program an Allen Bradley SLC-500 system. 4. Install and maintain basic control system based on the SLC-500 5. Troubleshoot an Allen Bradley SLC-500 system. 6. Program an Allen Bradley CompactLogix with RSLogix5000 7. Maintain and troubleshoot an Allen Bradley CompactLogix system 8. Interpret AB PLC-5 hardware addressing & block transfer instructions

- Module One (17 MB)
- Module Two (7 MB) 2
- Module Three (7 MB)
- Module Four (4 MB)
- Module Five (3 MB)
- Module Six (10 MB)
- Module Seven (583 KB)

Name

PLC200 M2 (1).zip
3 open-pro240-process-troubleshooting-export (1) (1).imscc
17_1212_+QM+Alignment+-+IND-121+lite+version+latest+version.docm
open-pro100-intro-to-process-technology-export (2).imscc



Name

5

21_PLC200 Module 2 Learning Sequence Sheet 010617.docx
22a_PLC200 Module 2 Information on RSLinx and RSLogix500.pptx
22b_PLC200 Module 2 Intro to Virtual Machines.pptx
23_PLC200 Module 2 KAA Study Guide.docx
24_PLC200 Module 2 Practice Quiz.docx
25a_PLC200_Lab03_SLC-500 Getting Started with RSLogix500 Lab M2.docx
25b_PLC200_Lab04_SLC-500 Relay Instructions Lab M2.doc

Common Cartridge Files found on Skills Commons

PRO240 Industrial Troubleshooting

This course Provides instruction in the different types of troubleshooting techniques, procedures, and methods used to solve process problems. Topics include application of data collection and analysis, cause-effect relationships, and reasoning.

Course description and competencies (131 KB)

Course material imscc file that can be imported to an LMS using a standard import or changed to a zipped file command or opened/viewed with a zipped file application. (2 MB)

Did you download this item? We value your feedback, and it'll only take a minute

Date:
2014-07-01

Primary Material Type:

killscommons.org/bitstream/handle/taaccct/2712/open-pro240-proce...

open-pro240-pr....imscc

Some authors do not want to license all of their objects, so they export their online course with all of the object as a ".imscc" type of file. This way they can license only the online course. The .imscc file can be imported into the LMS.

A Canvas exported courses (as a .imscc file can import into Canvas at another institution, but some objects are removed if imported into Blackboard or Sakai.

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Some of my Favorites on Skills Commons Site

MTE247 Strength of Materials Course Pikes Peak CC

http://www.skillscommons.org/handle/taaccct/3914

EEM151 Motors and Controls I, Midlands CC, SC

http://www.skillscommons.org/handle/taaccct/741

OPT1100 Tooling & Machining Metrology, Stark State College, OH

http://www.skillscommons.org/handle/taaccct/16107

Mechanical Components, Purdue University Northwest, IN

http://www.skillscommons.org/handle/taaccct/10929

Introduction to Electrical Circuit Simulation, Colorado Mountain College, CO

http://www.skillscommons.org/handle/taaccct/18698

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ATECENTRAL.NET:

ATECentral.net is a website that houses all the information about NSF Projects and NSF Centers throughout the nation. It also holds all of the resources that were developed with NSF funds.

atecentral.net

ATE CENTRAL
SUPPORTING ADVANCED TECHNOLOGICAL EDUCATION

Search GO
Advanced Search

HOME ATE 101 COMMUNITY RESOURCES ABOUT

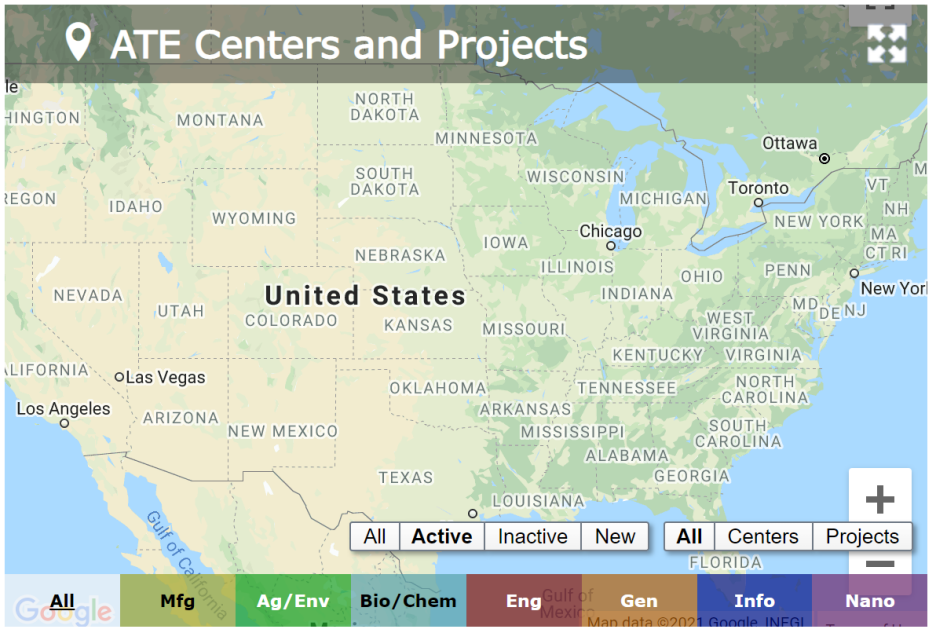
What is ATE?

With an emphasis on two-year colleges, the National Science Foundation's ATE (Advanced Technological Education) program focuses on the education of technicians for the high-technology fields that drive our nation's economy.

Learn More About ATE

ATE Central Tools & Services

ATE Centers and Projects



You are logged in.
Welcome, twylie

Your Microsite
Preferences
Log Out
Add
Edit

Folder

Main Folder Edit
There are no resources in this folder.

ATE Events

- *Photonics West* Mar 6
- *ABRF Annual Meeting* Mar 7
- *Food & Agriculture* Mar 10
- *Seminar w/ Xinwei Wang*

Toolbox

Recent Searches

What Can ATE Central Do for Me?

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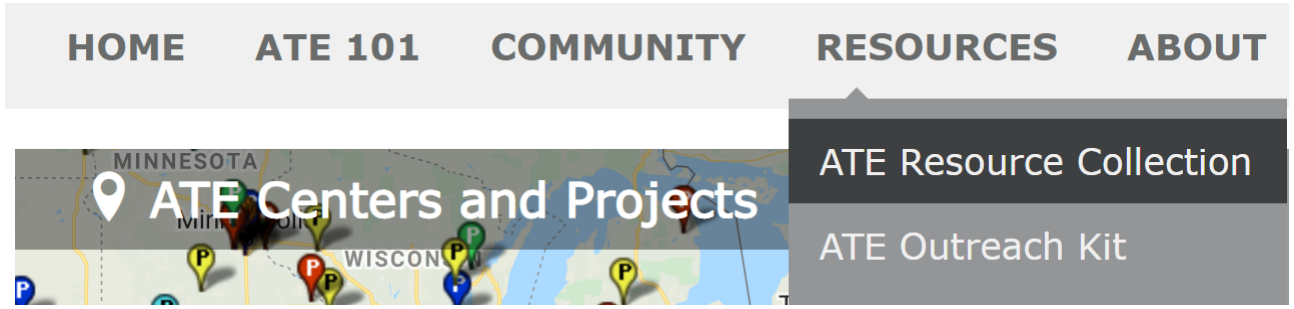
ATECENTRAL.NET:

If the user clicks on the "All" option on the map (shown by the red arrow), it will display all of the active NSF ATE Projects and Centers within the country. The user can click on any of the pins, and it will show the name of the award, as shown below.

ATECENTRAL.NET:

Click on Resources, then choose ATE Resource Collection. The user can choose any of the categories at the bottom of the page.



Browse Resources

The ATE Central resource collection and archive contain curriculum, professional development materials, videos and other valuable resources created and collected by the ATE community. Browse the resource collection using the categories listed below, or search for ATE resources via the box at upper right.

7 classifications found.

- **Browse by:**
- **Education Level**
- **Format**
- **GEM Subject**
- **Resource Type**

Advanced Manufacturing Technologies 623
Agricultural and Environmental Technologies 858
Bio and Chemical Technologies 575
Engineering Technologies 1,473
General Advanced Technological Education 995
Information and Security Technologies 816
Micro and Nanotechnologies 388

ATECENTRAL.NET:

http://tiij.org/issues/issues/winter09/Winter09/cheng.pdf

Industrial Automation Tutorials
Presented on behalf of Galil, these videos, presented by "industry leader" Jacob Tal, provic compensation, piezo-ceramic actuators, microstepping, and more. These two-minute vide common motion and I/O problems such as connecting to a Galil controller, PID temperatur
http://www.galil.com/learn/online-videos

Mechatronics Certification
This four-page document demonstrates how the College of Lake County (CLC) Mechatroni Systems Certification Program, Level 1 Mechatronics Systems Assistant and Level 2 Mecha the Florida Advanced Technological Education Center (FLATE), includes a short introductio

Hydraulics & Pneumatics
This site, created by Penton, is the leading international technical magazine of fluid power fluid power technology, through both technology articles and application stories. Emphasiz fluid-powered machines and the plant engineer who maintains them. Also included in the.
https://www.hydraulicspneumatics.com

PRDE 2420 - Capstone Project Syllabus
This is a syllabus for a four credit course offered at Macomb Community College that integ solving, time and team management, and process changes. Upon completion of this cours present ideas in a team environment and complete a group concept, (2) utilize research te

Emergency Preparedness Management: Occupational Profile
This document, created by Eastern Iowa Community Colleges, serves as an overview of jo management. What does emergency preparedness management involve? As the documen application and coordination of a process that brings resources together to prepare, respo

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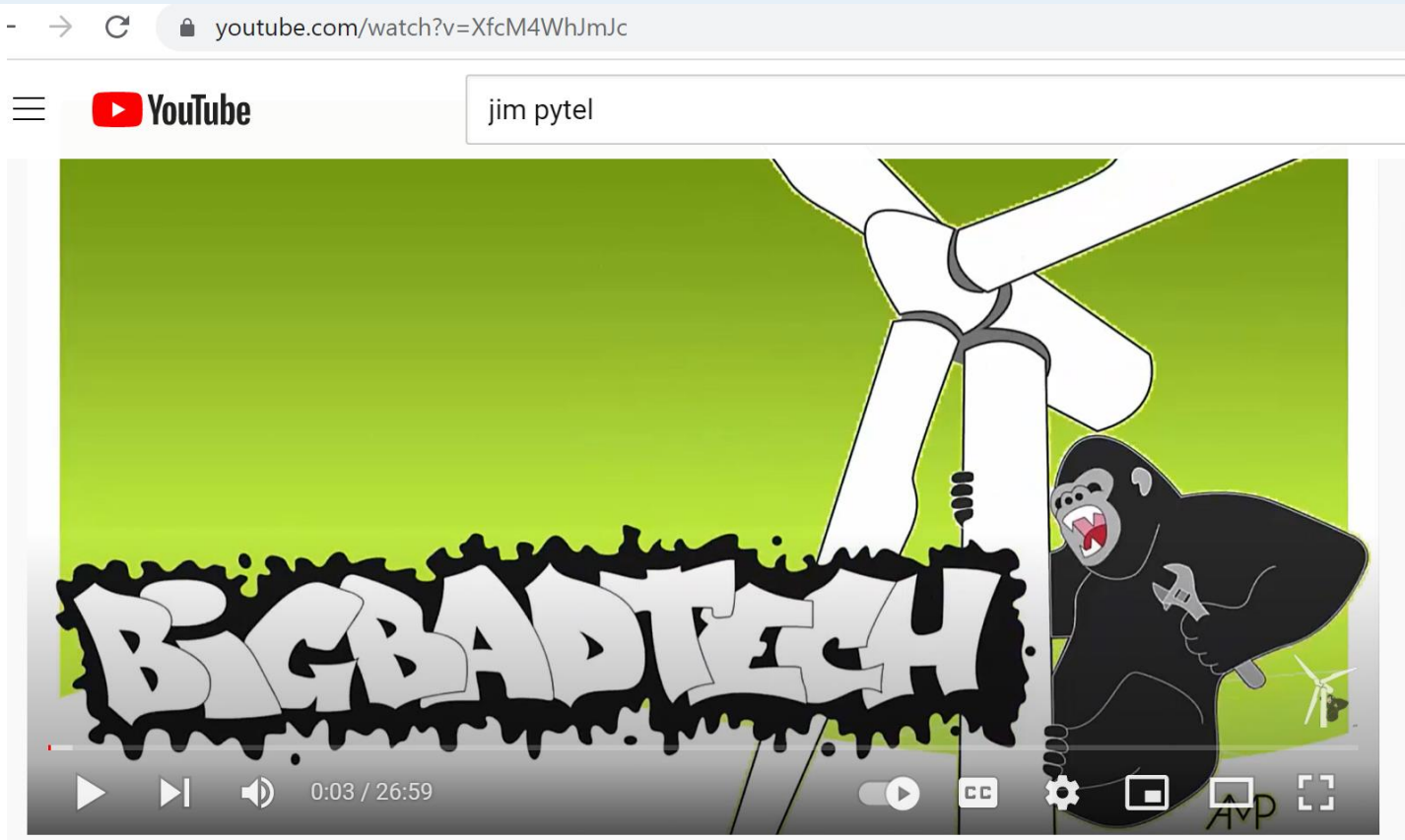
Jim Pytel YouTube Channel:



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Jim Pytel YouTube Channel:

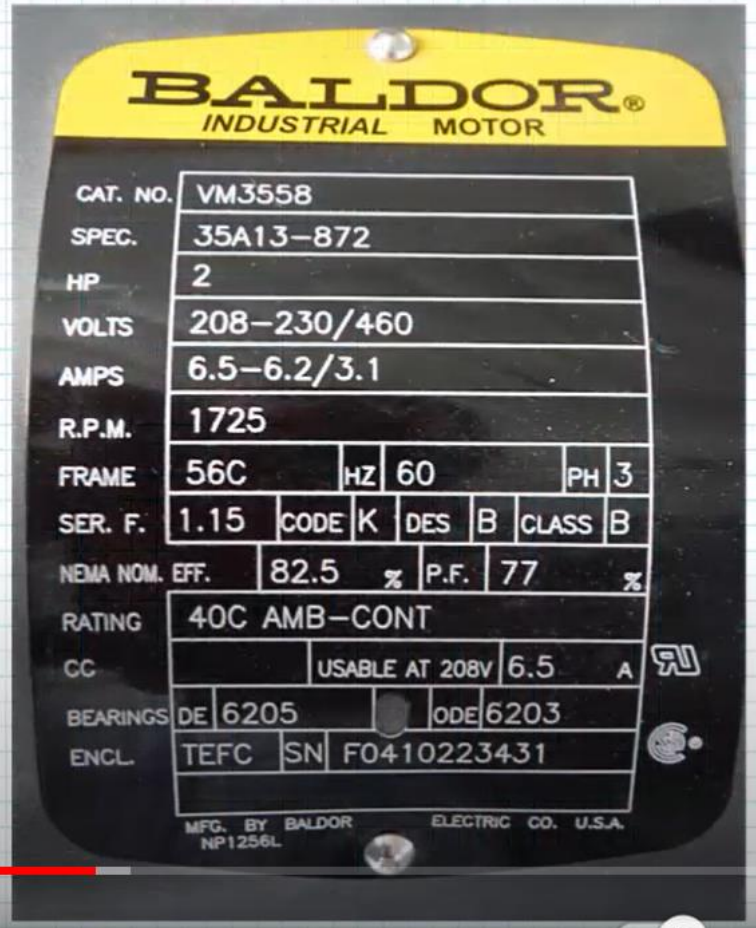
YouTube

jim pytel

Manufacturer
Model
Serial Number

Electrical Characteristics
Phase
Frequency
Voltage
Current
Power Factor
Efficiency
Inrush Code
Connection Diagrams

Mechanical Characteristics:
Rated Power
Rated Speed
Design Code
Frame
Enclosure
Insulation Class
Temperature Data
Duty Cycle



9:38 / 26:59

How-To Videos for Session 1:

YouTube Video: T. Wylie, Video on Finding OER Videos and Simulations 042221
https://youtu.be/uo934NaFoxs

YouTube Video: T. Wylie, Video Searching for OER in Skillscommons 042221
https://youtu.be/ep4Erjg46bs

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The End of the Presentation

Please email the presenter with Any questions you may have, as well as any feedback on the session (twylie@northweststate.edu)

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