CREATE Faculty Training on CBE Learning

Created by Tom Wylie, 6/27/23

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CREATE Faculty Training on CBE Learning

Training topics for this training session:

1. Review the steps to developing a module
2. Review a Learning Thread
3. Open Education Resources
4. Simulations
5. Review the development of a learning object
6. Introduction to creating Learning Objects
    a. PowerPoint
    b. Converting PPT to PDF
    c. Voice over PPT
    d. Creating videos with a camera
    e. Creating a screen CAM video to show how to use software

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Website to get Sample Documents:

Handouts for the Workshop is available at the Project Website:

https://ate.is/Scaling_CBE

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2 Parts to the CREATE Project

Faculty Prof. Dev.

Develop Faculty Skillset:
*Convert technical courses to a CB/Hybrid model
*Effectively teach the CB/Hybrid courses

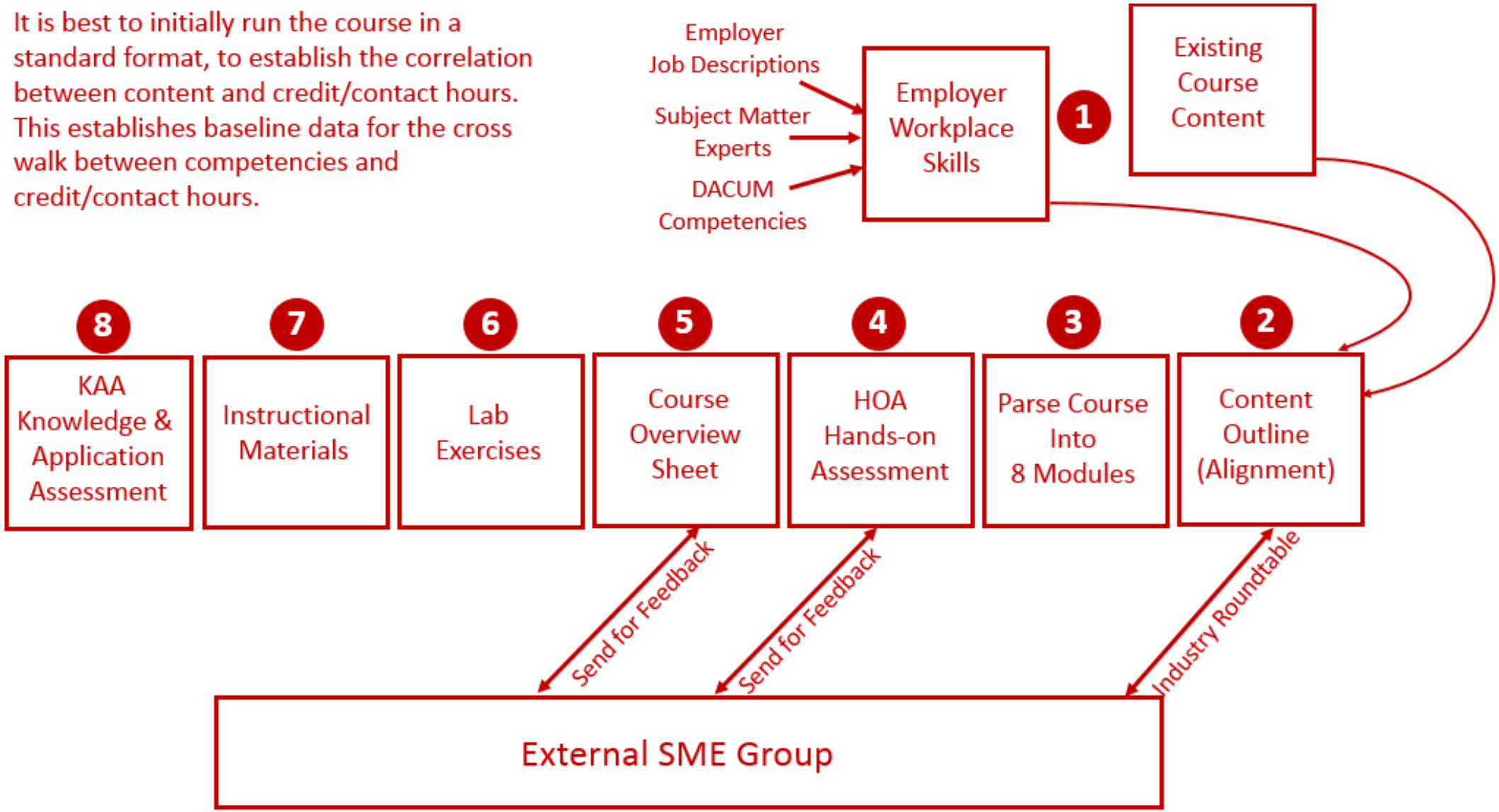
Prepare the Faculty to:
*Utilize OER material for teaching
*Develop online learning objects:
  *Videos, simulations & PPT/PDF
*Deliver instruction in a CB/Hybrid model

Prog. Controller 1	Mike & Scott
Prog. Controller 2	Mike & Scott
Elect. Troubleshoot	

Course Conversion:
*Re-Align the Curriculum
*Convert the courses to a competency-based/hybrid model

Reverse Design:

It is best to initially run the course in a standard format, to establish the correlation between content and credit/contact hours. This establishes baseline data for the cross walk between competencies and credit/contact hours.



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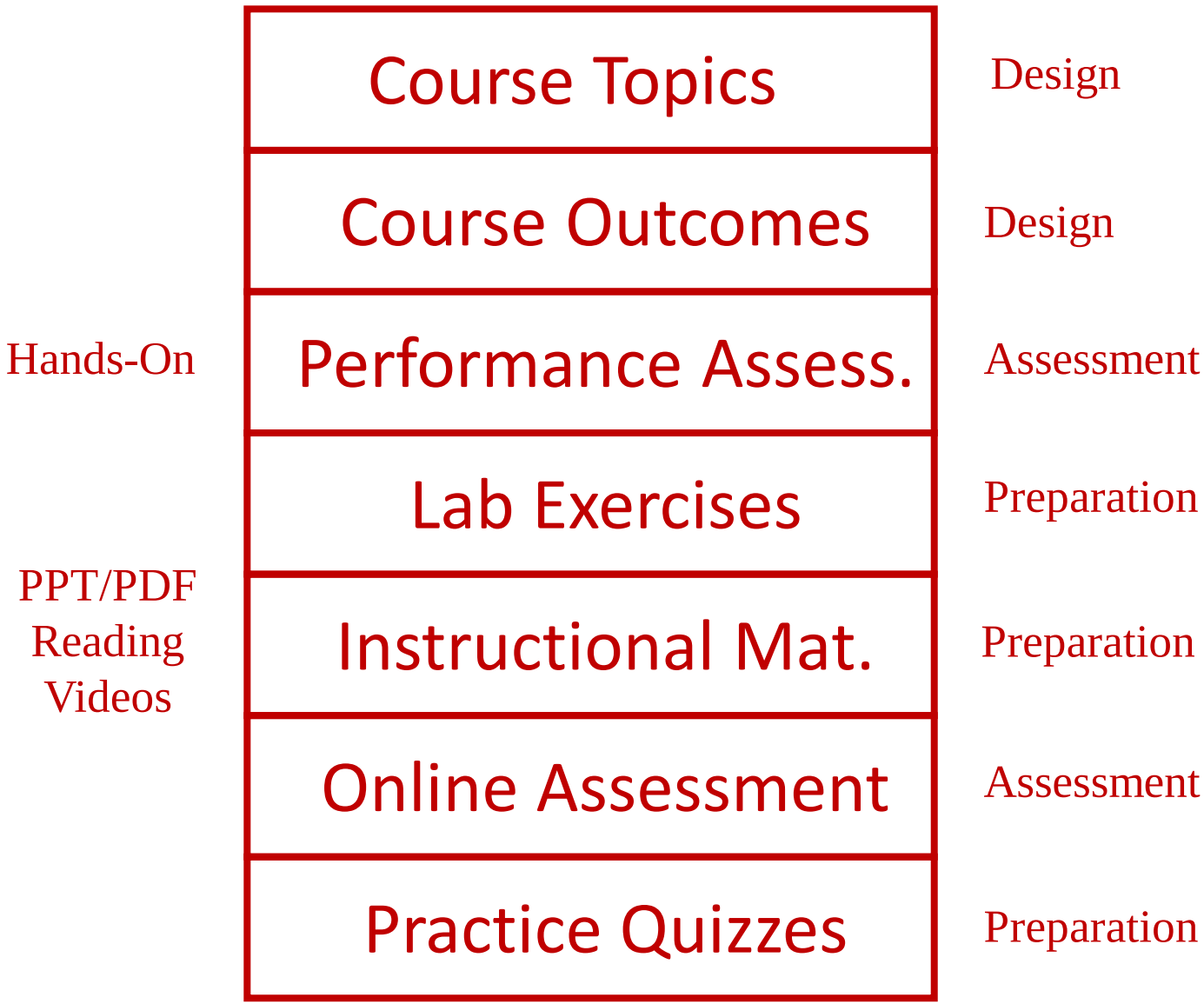
Thread of Learning:



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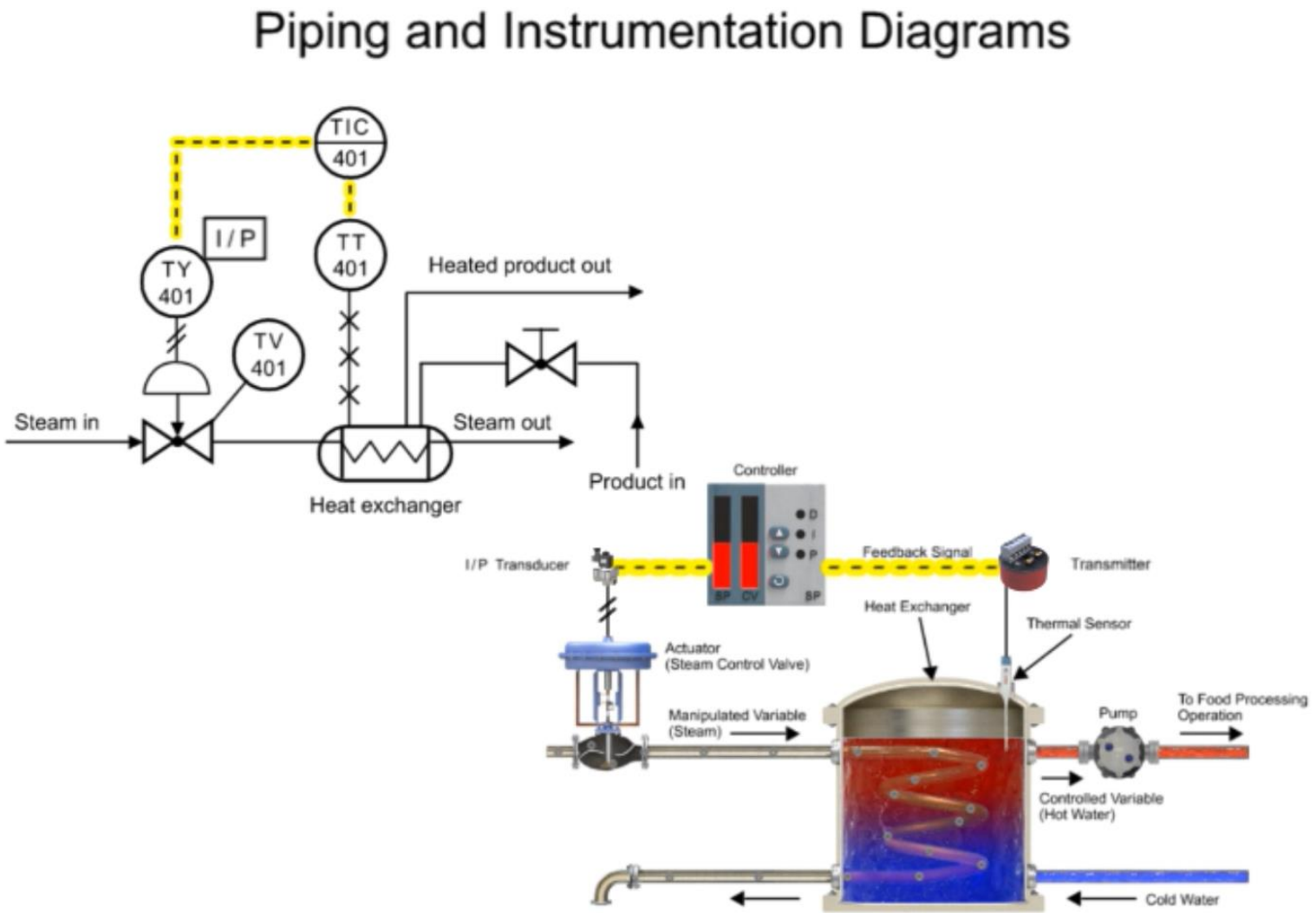
Many good Videos at EngineerTech.Org



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

Northwest State Community College

NSF

OER Material

Open Educational Resource Material

*Open for anyone to use in their courses

*Any material developed with funds from a federal grant is OER

*View the OER PowerPoint

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Simulations using Automation Studio:

Used to prepare students for the Hands-On Lab Exercises:

*Electrical

*Motor Control

*VFD

*Pneumatics

*Hydraulics

*PLCs

Simulations do not replace Hands-On Learning

View the Examples of Simulations on the Project Site:

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Building a Learning Object:

In the next week, could each of you identify a course that could be improved on, and sketch out what type of learning object you would like to create, and Mike or myself can work with you to create it. No presentations, no pressure; just a way of better learning how to apply this information into a curricular change.

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Software used to Create Objects

TechSmith (Techsmith.com), located in Michigan, developed and distributes Snagit and Camtasia. These products are targeted toward Faculty. They are simple to use and give immediate results. Snagit is an image or video capture software, and Camtasia is a product with multiple uses, but in the end it produces high quality videos. MP4 is the preferred video format for creating instructional videos. MS PowerPoint is the other key software that is needed to create illustrated graphics and animations. Google Slides does not have all of the features that MS PowerPoint has.


Snagit 2019


Snagit 2019 Editor

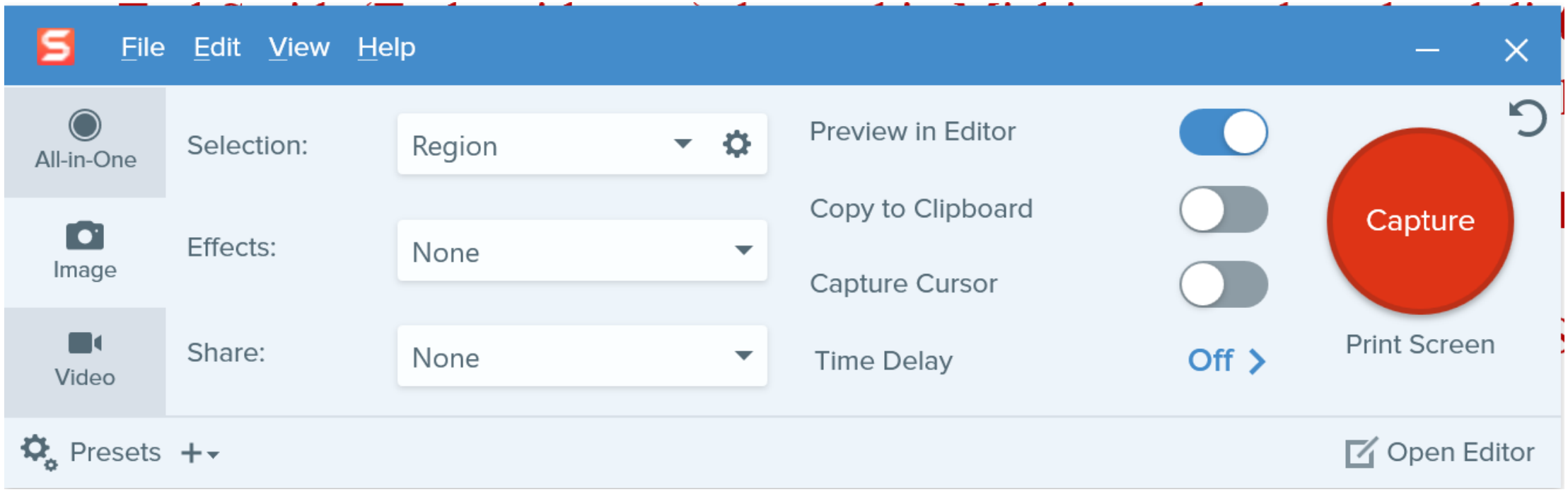

Camtasia 2019 Recorder


Camtasia 2019

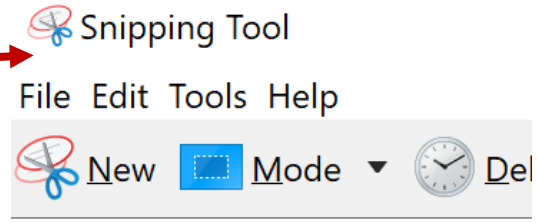

Microsoft PPT

TechSmith Snagit 2019 (Capture):

This is the interface for Snagit capture. The user can designate a hot key such as the "PrtSc" key (Print Screen), which will bring up the cross hairs for capture.



Windows 10 Snipping Tools



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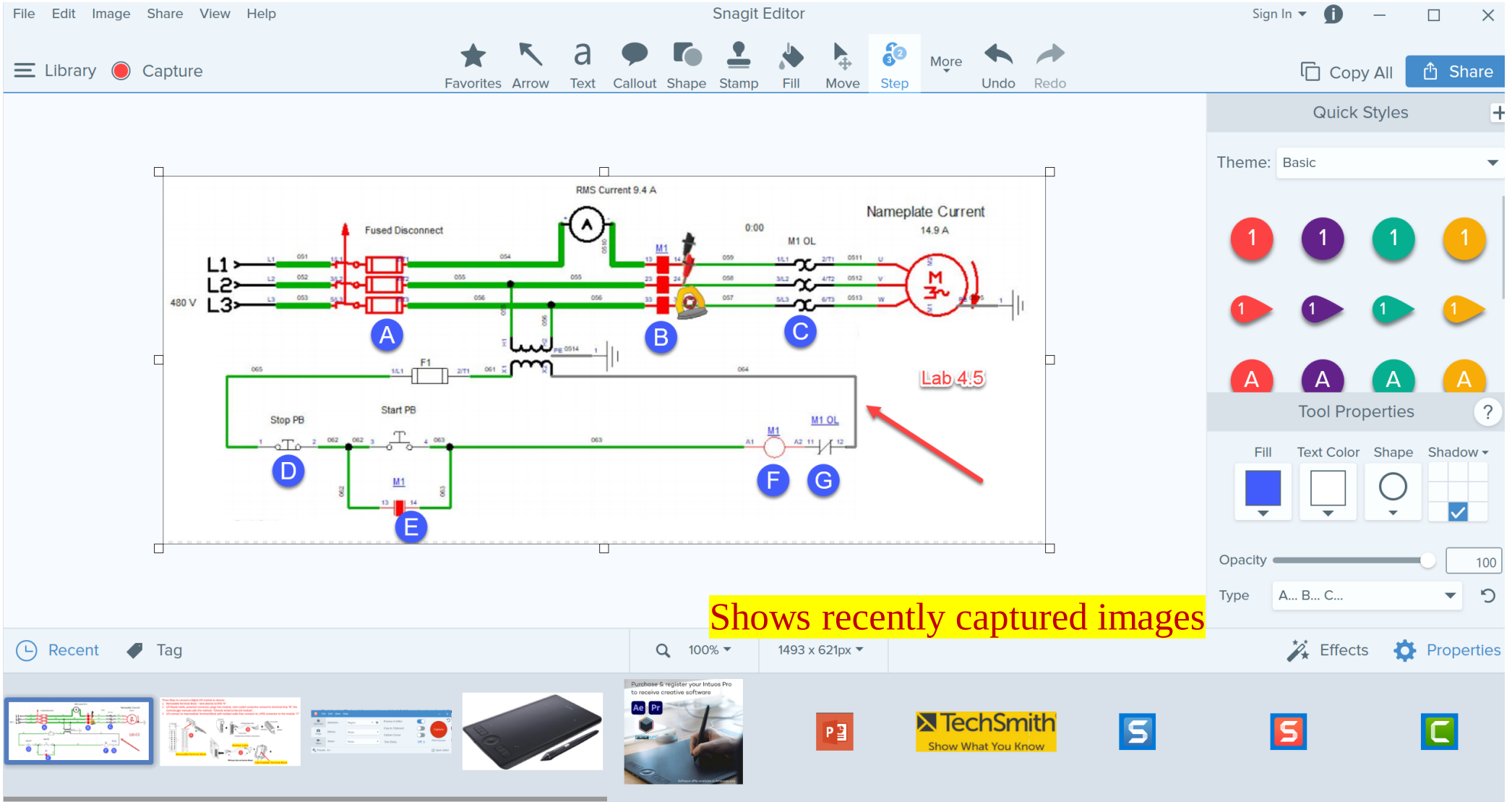
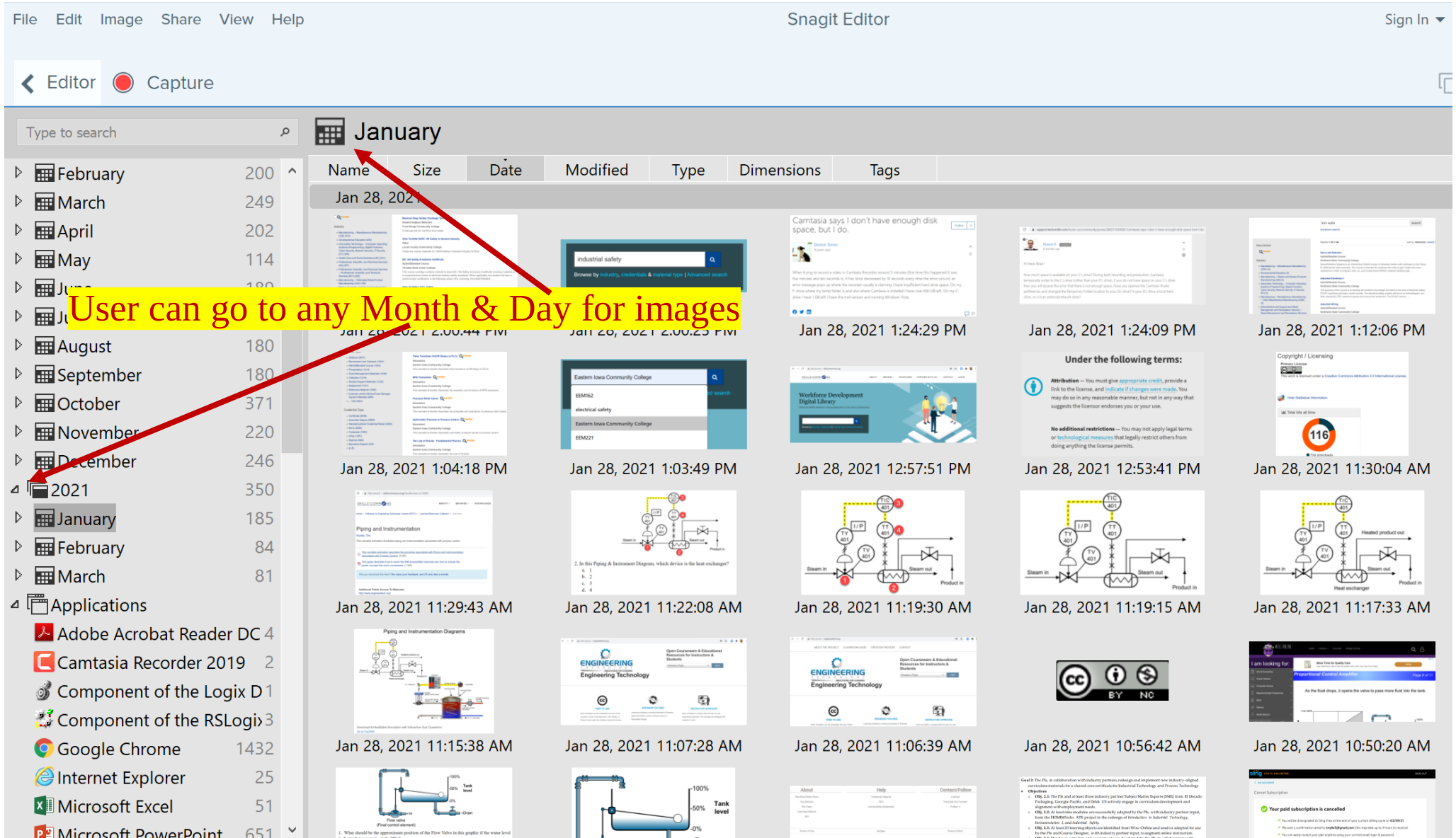
TechSmith Snagit 2019 Editor:

Tools to modify the image



Shows recently captured images

TechSmith Snagit Editor Library



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Four Primary Applications for Snagit

1. Capture a portion of a screen and save as a .PNG file or to clipboard

2. Record video from an existing video. I sometimes use this if I am recording something from a recording on a website that I want to save, or I am capturing an important video on YouTube, just as a backup in case they pull it down and I need to create one from scratch.

3. Capture a panoramic scrolling image. This is if I have a PDF that I want to backup, but the properties will not allow a download or to print it. I will scroll down through the document and save as a PDF. Always follow good legal practices.

4. Capture a block of text from the screen and "grab text" which will use OCR (Optical Character Recognition) and copy all and paste into a document so I can edit the text. I find old labs I created 10 years ago and I do not have the original files. Instead of re-typing them in, I use Snagit to capture the text as an object and convert it to editable text.

How to Create Videos

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Video of how to Operate a CNC Controller

.MP4 or .MOV File

Camtasia 2022

.MP4 File

YouTube

CANVAS

CANVAS

Studio

Video Quiz

Video on how to Setup RSLinx Recording Computer Screen

Camtasia Recorder 2022

Zoom

CANVAS

Camtasia 2022

Studio

.MP4 File

YouTube

CANVAS

CANVAS

Studio

Video Quiz

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How to Create Videos

Voice over PPT Video of a Print Recording Computer Screen Recording voice as you annotate (Wacom tablet or mouse)

Camtasia Recorder 2022

Zoom

CANVAS

Camtasia 2022

Studio

Video Quiz

.MP4 File

YouTube

CANVAS

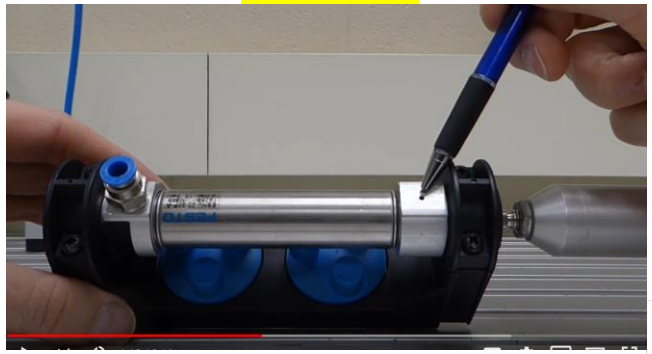
CANVAS

Studio

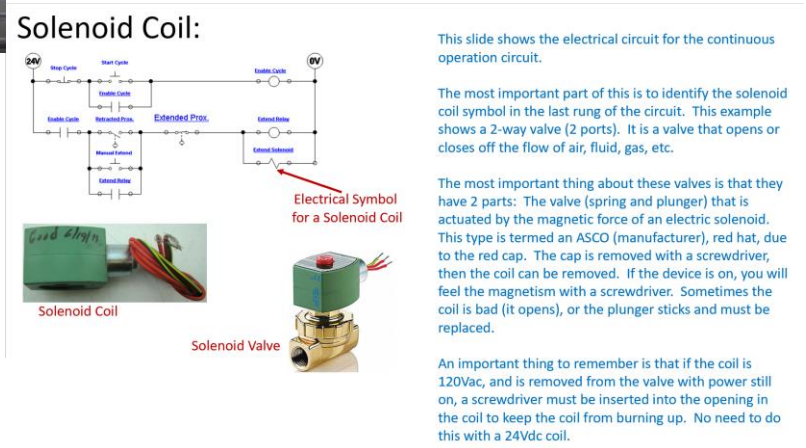
Video Quiz

Learning Objects the User Navigates

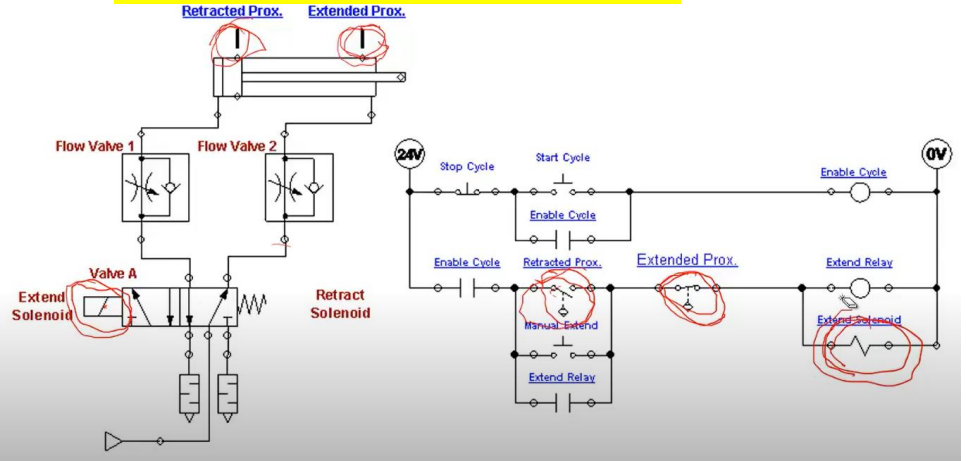
Videos



PPT/PDFs



Voice over PPT Video



Independent Learning Objects are posted in an LMS for student access. These objects can be viewed in any sequence. The upper left graphic shows a video that was shot with a camera, explaining a single acting pneumatic cylinder.

The middle graphic is a PPT that will be converted to a PDF, then posted in the LMS.

The bottom graphic is a voice over PPT, where the graphic was put into PPT, then annotated with a stylus on the computer touch screen.

All of these objects can be viewed on a smart phone, phablet, tablet or computer screen.

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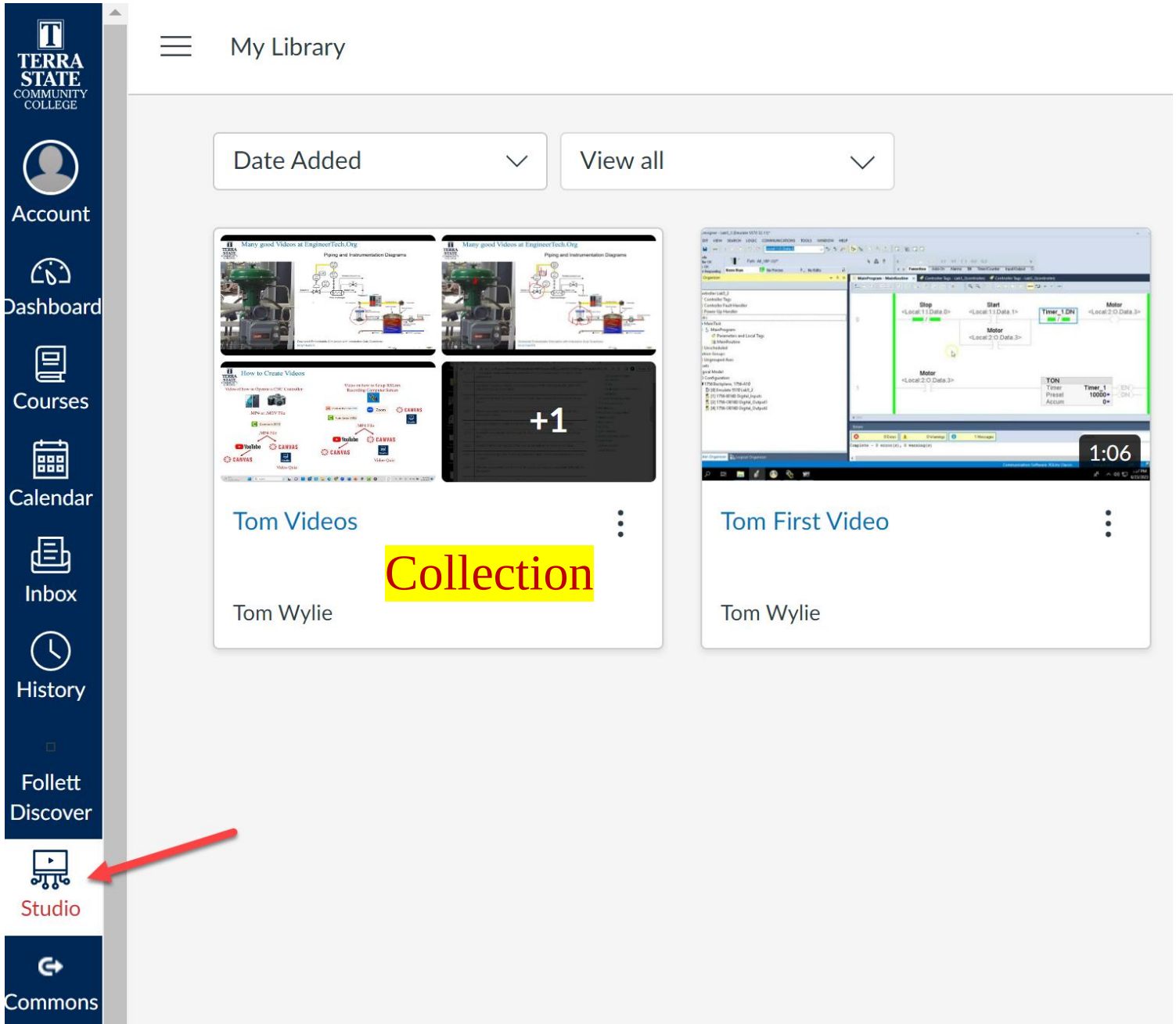
Example Videos:

1. A video shot in the lab showing how to do something
   (Video Links on Scaling Project site, Josh Coupling)

2. A screen cam video (22_0614 AS Basic Electrical Simulation)

3. A voice over PPT in Canvas (Voice over PPT with Wacom)

Videos in Canvas:



Collection of Videos in Canvas:

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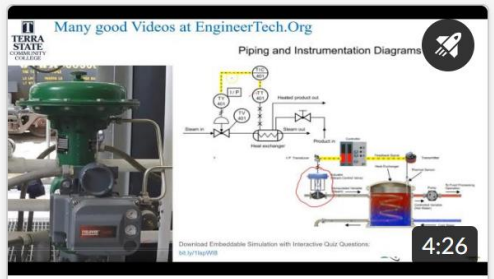
Account
Dashboard
Courses
Calendar
Inbox
History
Follett Discover
Studio
Commons
Help

My Library > Tom Videos

RECORD ADD

Airplane Icon means a Quiz was created for the Video

Date Added | View all media | More options



Voice over PPT with Wacom 062423

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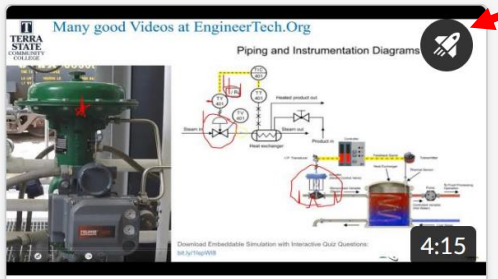
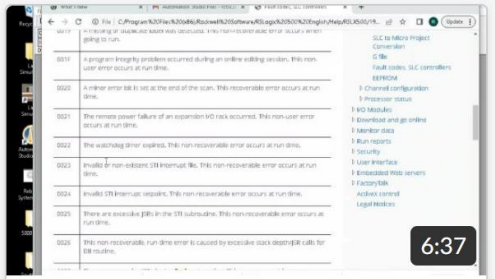


Voice over PPT P&ID mouse

Tom Wylie

Tom on creating videos 062523

Tom Wylie



23_0622 basic recording of help file on RSLogix500

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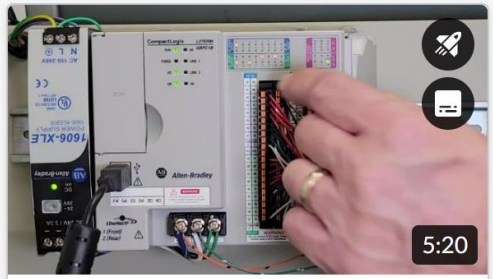

CompactLogix Overview

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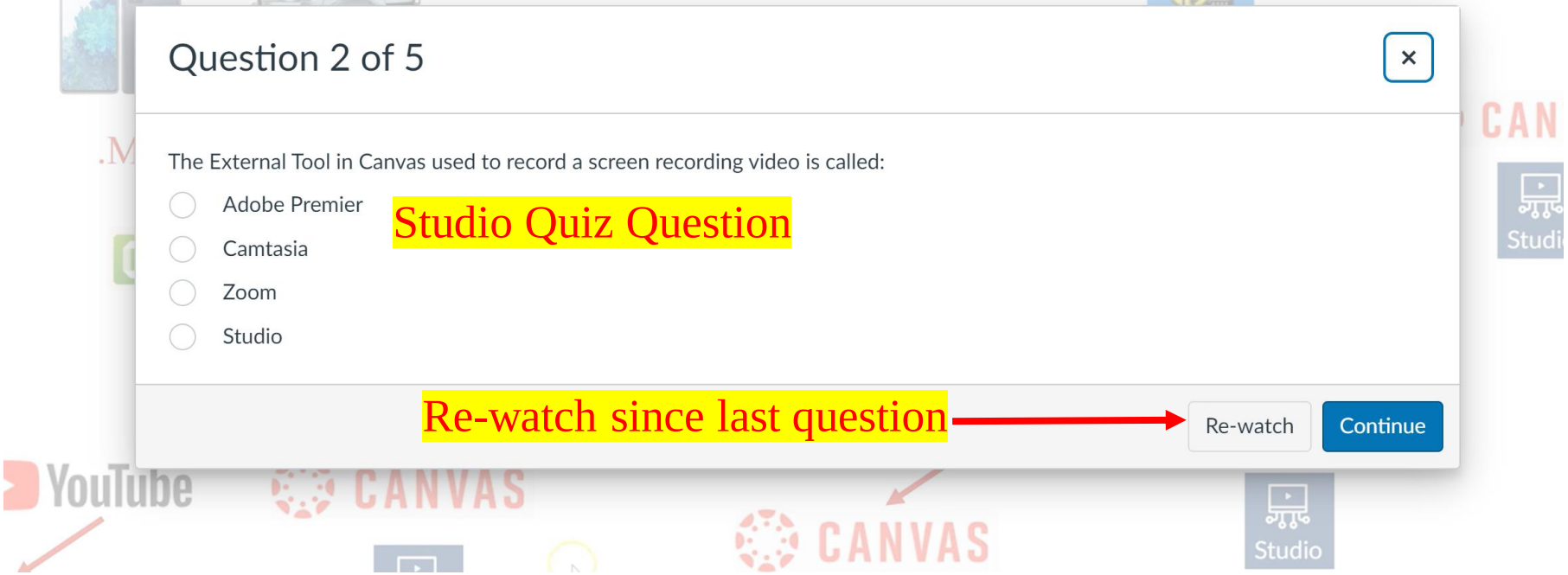
Collection of Videos in Canvas:



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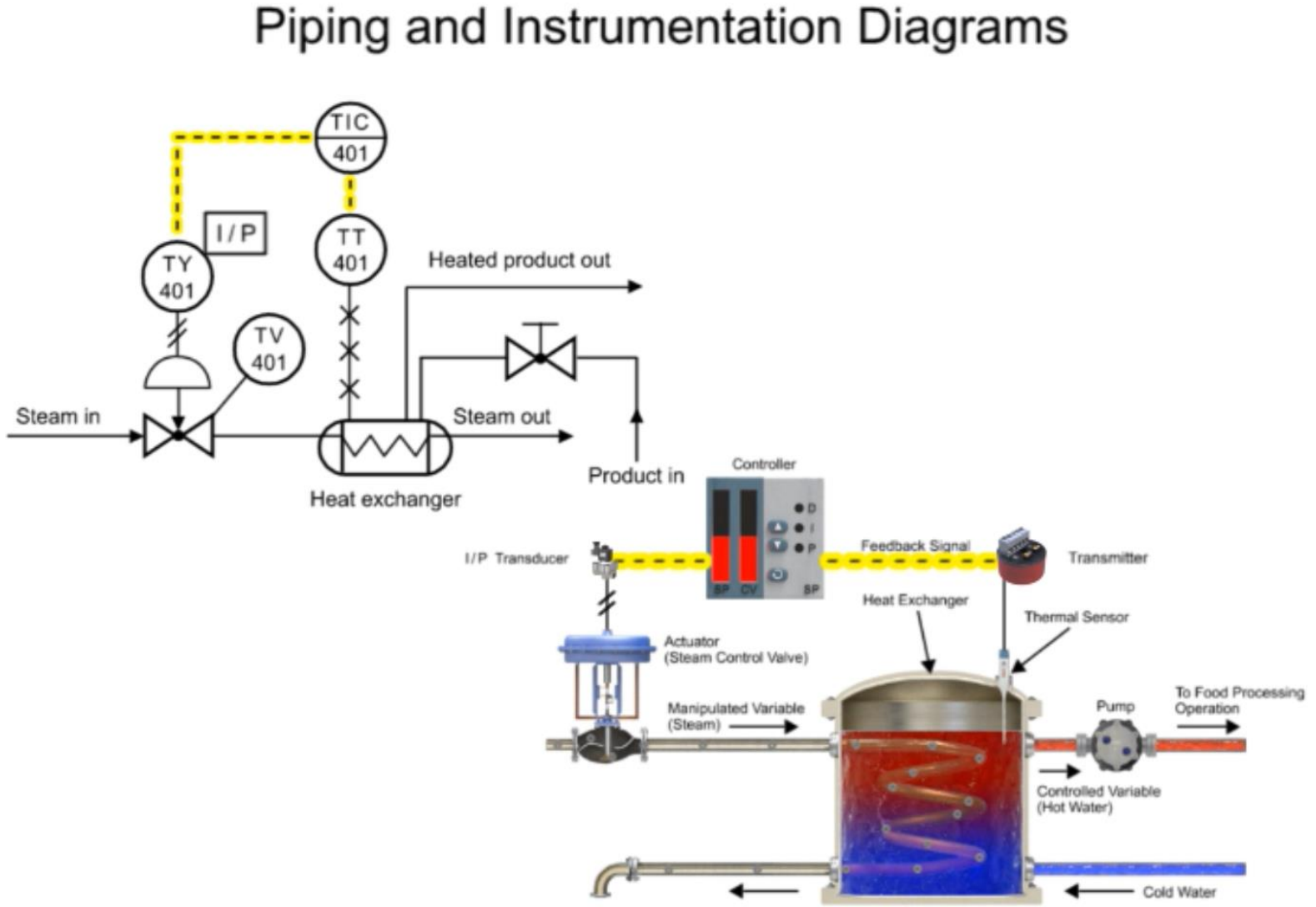

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bit.ly/1IspWI8

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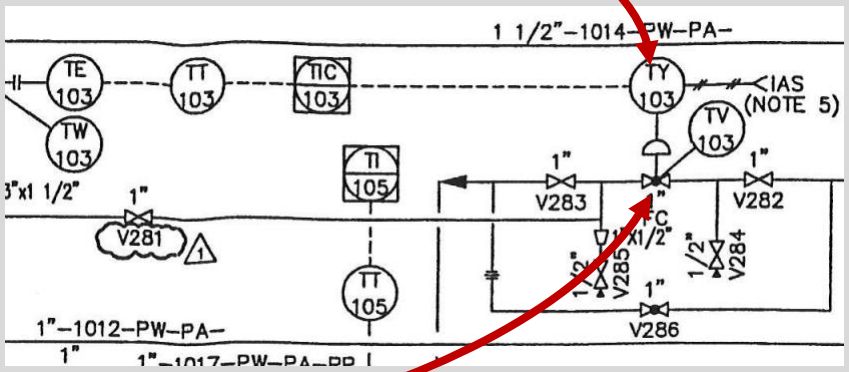
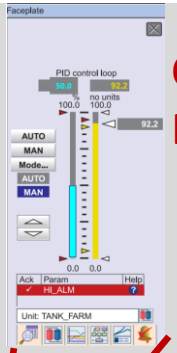
Interpreting a P&ID to the actual hardware:

Digital Valve Controller (I/P)



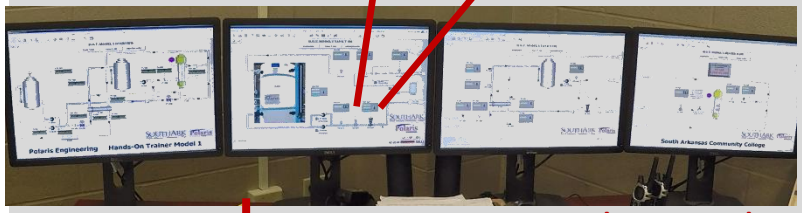
TCV-103 Control Valve

Signal Flow in a Distributed Control System:



Controller Faceplate

50%



Control Console

50%

Delta V DCS System

12 mA

DVC6200 (I/P)

9 psi

1/2 Open

70 psi

Charge Tank

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This Concludes this Instructional Document