

Instructional Video Basics

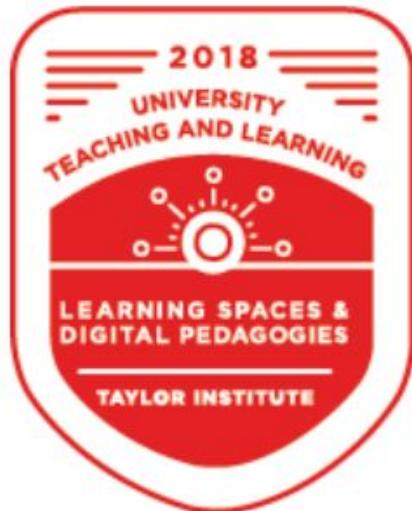
February 4, 2019

Laura L. Perissinotti, Mohamed Abdelsamie and Isadora Mok-Kulakova

An important reminder

Please sign in!

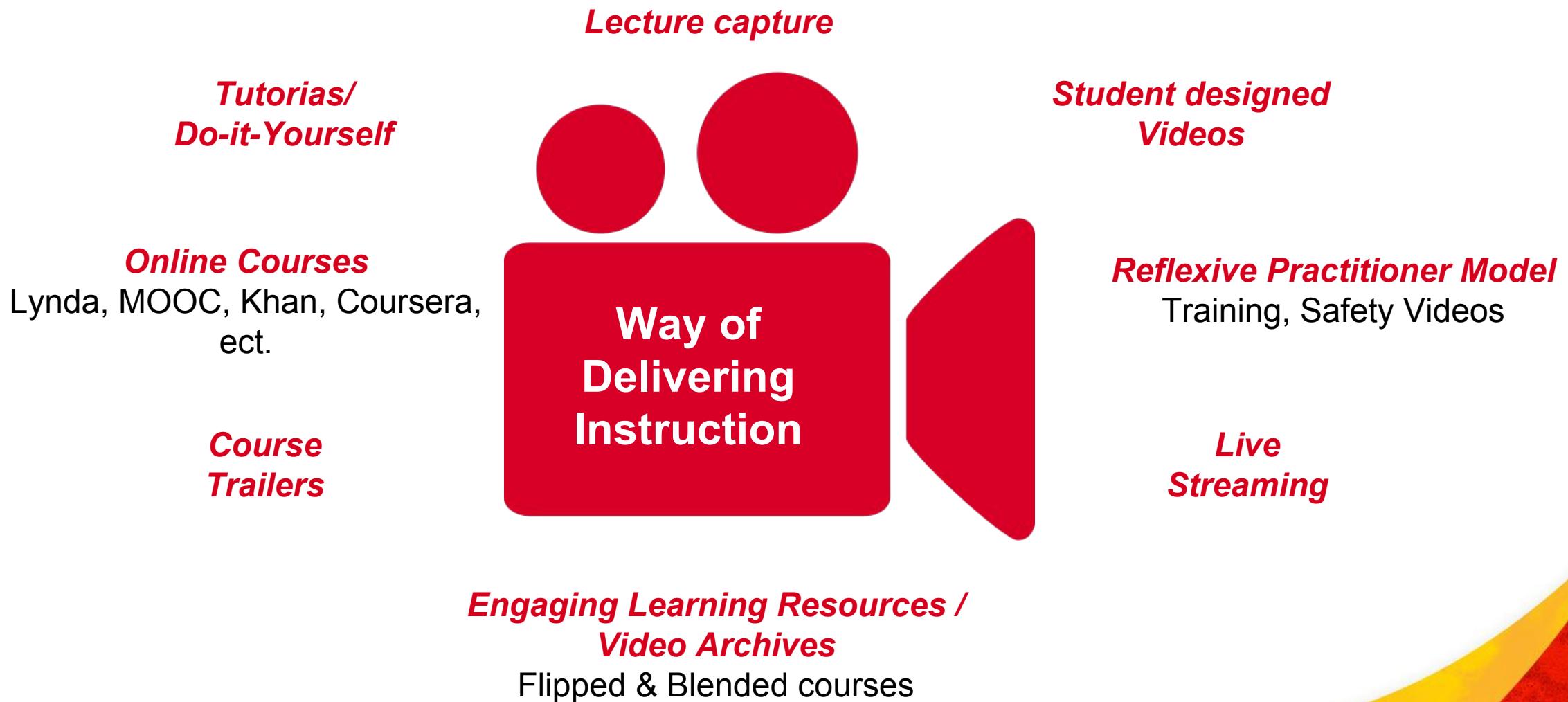
*If your name is not on the sign-in sheet, please add it together with your email address – you will be registered after the workshop. *Also, use the sign-in sheet to correct your name or email.*



This badge is part of the **Postdoctoral Scholar** and **Graduate Student** Certificates in University Teaching and Learning program.

<http://www.ucalgary.ca/taylorinstitute/certificates-university-teaching-and-learning>

Instructional Video



Today's Outcome



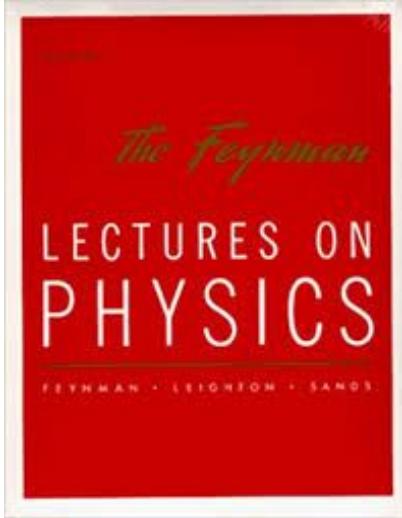
Have Fun!

- ▶ **Evaluate** various **types of instructional videos** and determine which form may best engage students and support the intended learning outcomes

- ▶ **Identify** and **utilize** available **technologies** to create a simple teaching and learning video

Video Lectures tracked down in time

1960s student



"These are the **lectures** in physics that I gave last year and the year before to the freshman and sophomore classes at **Caltech**. The lectures are, of course, not verbatim—they have been edited, sometimes extensively and sometimes less so. The lectures form only part of the complete course. The whole group of **180 students gathered in a big lecture room twice a week to hear these lectures** and then they broke up into small groups of 15 to 20 students in recitation sections under the guidance of a teaching assistant. In addition, there was a laboratory session once a week."

*Richard Feynman, Lectures on Physics,
Preface, June 1963.*

 This is a vintage advertisement for the Sony VCK-2000 Video Camera Kit. The top half of the ad features a black and white photograph of a Sony Videocorder unit mounted on a tripod. The unit has a built-in microphone and a small screen. The bottom half contains text and a smaller photo. The main headline reads: "Video Camera gives you an easy way to record family events for immediate playback". To the right, a man and a woman are shown using a portable video camera to record an event. The text on the right side of the ad provides details about the kit, including its compatibility with the Videocorder and its use for recording family events. It also mentions the kit's portability and ease of use.

For more versatile usage of the Videocorder, Sony has developed its video camera which is included in the VCK-2000 Video Camera Kit. Using this Kit, any event can be taped with sound for immediate replay on the Videocorder screen. Therefore, a home tape library of important events can be built: Athletes, actors, singers or musicians can record their own performances and study them for improvement. Parades, celebrations and other public events can be recorded on tape for showing at any time in the home. Any family activity such as parties, anniversaries, or weddings can be permanently recorded and stored in the home tape library.

Video Camera Kit

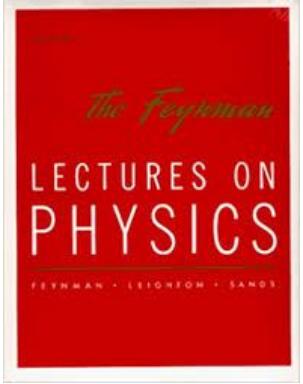
- Comes complete with camera, standard lens, camera cable, microphone, tripod, AC cord and extension cord—all in one portable case.
- Operation of the camera is simple.
- Camera is compact in size.
- Telephoto and wide angle lenses can be used.
- Videocorder screen can be used as a monitor when recording.
- Camera is solid state—maintenance free.
- Operates on regular household AC current.

Complete Camera Kit
VCK-2000, \$350.00

The Videocorder is not to be used to record copyrighted works.

Video Lectures tracked down in time

1990s student



Video Lectures tracked down in time

Today student



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Cornell University Search

CORNELLCAST

[EXPLORE](#) search 3,730 videos

[Playlist](#)

Richard Feynman Messenger Lectures (1964)

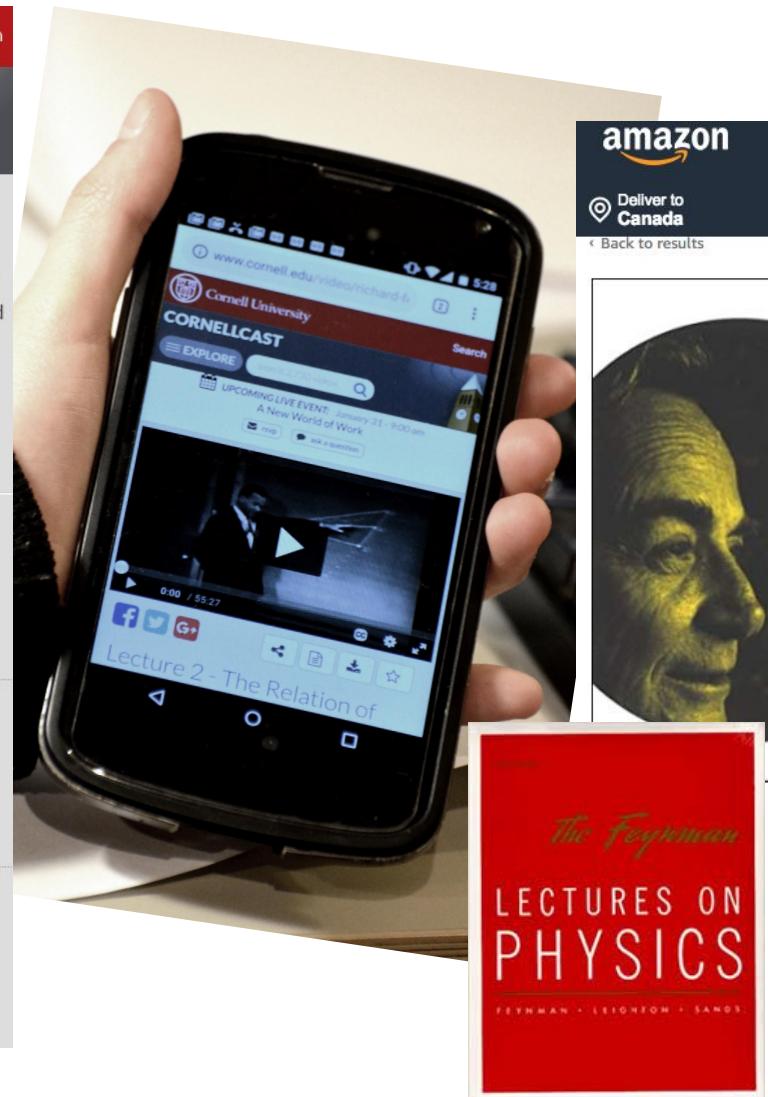
In these Messenger Lectures on "The Character of Physical Law," originally delivered at Cornell University and recorded by BBC Nov. 9-19, 1964, physicist Richard Feynman offers an overview of selected physical laws and gathers their common features into one broad principle of invariance. From 1945 to 1950, Feynman taught theoretical physics at Cornell. He went on to accept a professorship at Caltech and was named co-winner of the 1965 Nobel Prize in physics.

[share](#) [subscribe](#) [play all](#)

1 Lecture 1 - Law of Gravitation | The Character of Physical Law | Richard Feynman
ADDED SEPTEMBER 24, 2015

2 Lecture 2 - The Relation of Mathematics to Physics | The Character of Physical Law | Richard Feynman
ADDED SEPTEMBER 24, 2015

3 Lecture 3 - The Great Conservation Principles | The Character of Physical Law | Richard Feynman
ADDED SEPTEMBER 24, 2015



amazon Audible Audiobooks feynman lectures original

Deliver to Canada Departments Your Amazon.com Today's Deals EN

The Feynman Lectures on Physics: Volume 2, Advanced Quantum Mechanics

Audible Audiobook – Original recording
Richard P. Feynman (Author, Narrator),
 364 customer reviews

[See all 2 formats and editions](#)

Audiobook \$0.00 **Hardcover from \$39.90**

Free with your Audible trial 11 Used from \$39.90
3 New from \$126.73

For more than 30 years, Richard P. Feynman's three-volume *Lectures on Physics* has been known worldwide as the classic resource for students and professionals alike. Ranging from the most basic principles of Newtonian



Instruction Challenges

Richard Feynman, Lectures on Physics, Preface, June 1963.

The Audience



“...aiming at the more active student...”

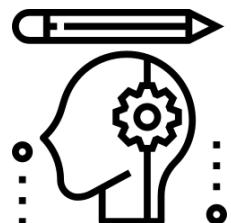
“...take care of the fellow that cannot be expected to learn most of the material...”

Feedback



“...there wasn’t any feedback from the students to the lecturer to indicate how well the lectures were going over.”

Active Learning

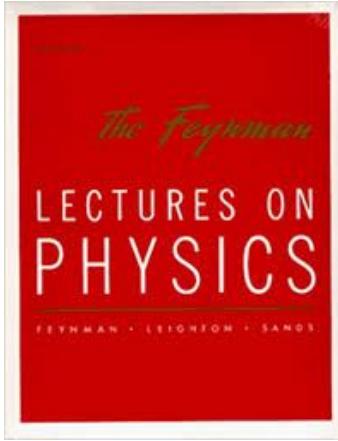


“It’s impossible to learn very much by simply sitting in a lecture, or even by simply doing problems that are assigned.”

Technology



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The image is an advertisement for the Sony VCK-2000 Video Camera Kit. It features a black Sony video camera mounted on a tripod, with a microphone attached. A red arrow points from the left towards the camera. Below the camera, a man and a woman are shown with a video recorder. Text on the page includes:

Video Camera gives you an easy way to record family events for immediate playback

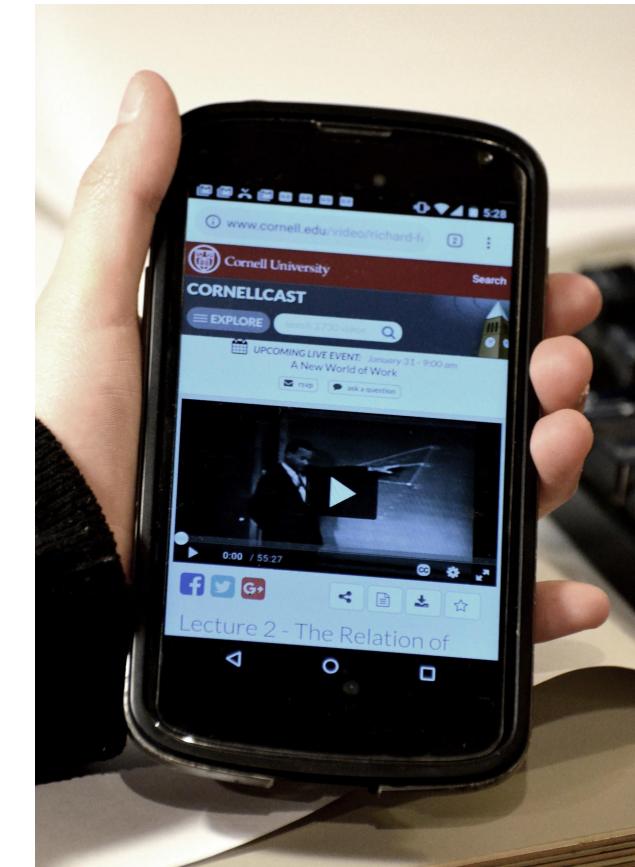
For more versatile usage of the Videocorder, Sony has developed its video camera which is included in the VCK-2000 Video Camera Kit. Using this Kit, any event can be taped with sound for immediate replay on the Videocorder screen. Therefore, a home tape library of important events can be built; Athletes, actors, singers or musicians can record their own performances and study them for improvement. Parades, celebrations and other public events can be recorded on tape for showing at any time in the home. Any family activity such as parties, anniversaries, or weddings can be permanently recorded and stored in the home tape library.

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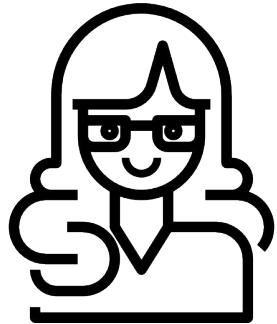
Complete Camera Kit
VCK-2000, \$350.00

The Videocorder is not to be used to record copyrighted works.



Why use Video for instruction?

Video → Multisensory Learning Environment



Access



availability
asynchronously
and independent
of location

Choice

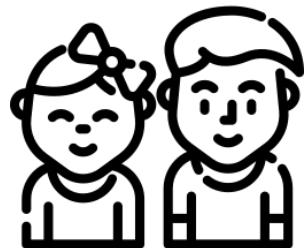


a library of materials to
view on-demand

Control



ability to start, stop,
pause, skip and review
material



*Kids are using video and learning essential editing tools at
Elementary School*



Recent Research says...

“...most of the instructional videos are still created based on the authors’ or designers’ institutions instead of relying on documented principles derived from scientific research and/or theoretical considerations from instructional design theories...”

[Logan Fiorella, Richard E. Mayer, What works and doesn't work with instructional video. Computers in Human Behavior, Volume 89, 2018, Pages 465-470.](#)

“So, there is an **urgent need** for more knowledge to **build research-based principles** for designing instructional video and **understand why these principles work** as well as **sharing** these insights with the relevant target population.”

[Björn B. de Koning, Vincent Hoogerheide, Jean-Michel Boucheix, Developments and Trends in Learning with Instructional Video. Computers in Human Behavior, Volume 89, 2018, Pages 395-398](#)



Recent Research says...

Research Directions



- Extending “traditional” design principles and recommendations.
- Investigating the effectiveness of “novel” design principles.
- Incorporating learner attributes.



Instructional **VIDEO** Challenges

- *Understanding the differences* between in-person and video-based teaching.
- Finding the *time* to create an effective video.
- Frustration with *video creation tools*.
- Identifying the elements that make the difference between a “*good*” versus “*bad*” video.

Students won't watch bad videos any more than they will listen and show up for borrowing lectures in person.

Plan for Today



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Observe

Observe different types of Instructional video examples.



Experiment

Experiment with video

Activity 1



Learn the basics

Identify and learn basic editing tools

Activity 2



Types of Instructional Videos

What to look for:

Observe

*Use the handout
and take notes!*



Instructional Video Basics Workshop

Observing Videos: What to look for?



Notes

Video Type

- Lecture Capture
- Learning Resource -> Mini Lecture for Blended/ Flipped Class or Online Course
- Learning Resource -> Video Material Archives
- Tutorial/ Do-It-Yourself
- Orientation/Training/Safety
- Other (Course Trailer/ Video Feedback/ Student Project Submission)

Content

- Clear Learning Objectives/ Goal-Oriented
- Chunking of information
- Multimedia, Multimodal

Duration

- Video Length: Is it segmented? Is it part of a collection or series of videos?

Delivery

- Machine-narrated presentation
- Instructor voiceover only or with visual presence (tone/ eye contact)

Technical Elements and Staging

- Lighting/ Film Quality
- Stage: outdoor/ indoors/ background/ clothing
- Audio Quality

Technology Used

- Boards
- Mics
- Camera/Webcam/Tripods
- Recording and Editing Software

Sharing

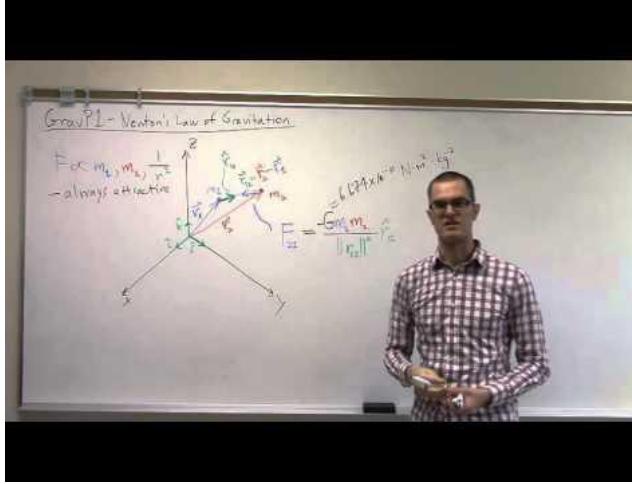
- Video Web Platforms (Vimeo/Youtube/others)
- Learning Management System (D2L)



Types of Instructional Video

Examples at UCalgary

GeoSciences



[YouTube Channel](#)

TFL Library - Makerspace



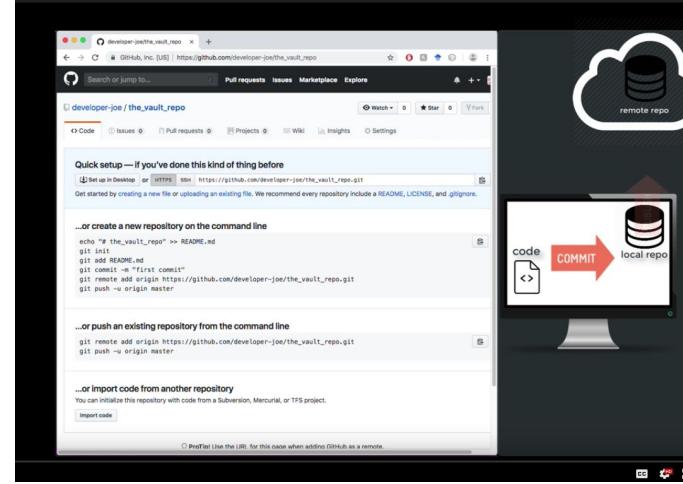
BioSciences



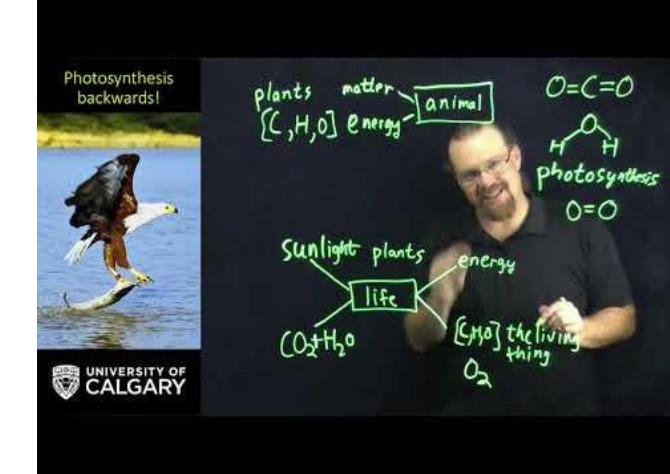
[YouTube Channel](#)

[Want to learn more?](#)

Computer Science

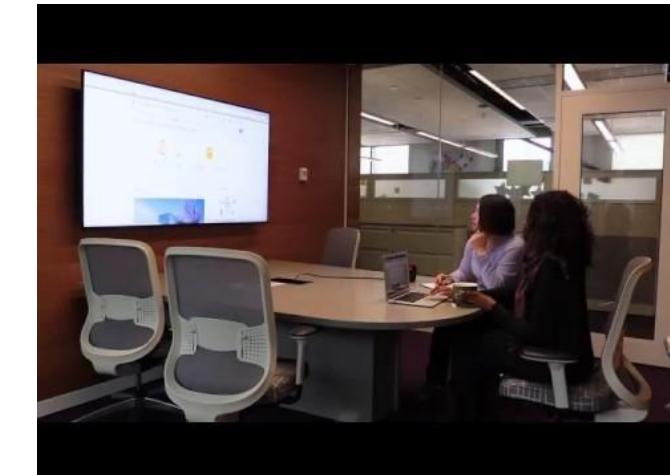


Physics and Astronomy



[YouTube Channel](#) [Want to know more?](#)

TI - Teaching Online Program



Types of Instructional Videos



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Online courses

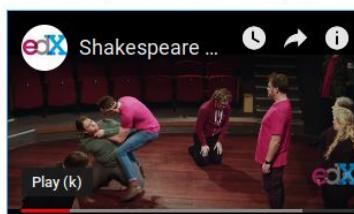




Courses ▾ Programs & Degrees ▾ Schools & Partners edX for Business

Search:

Home > All Subjects > Humanities > Shakespeare Matters



Shakespeare ...

Play (k)

▶ ⏪ YouTube ⏹

Shakespeare Matters

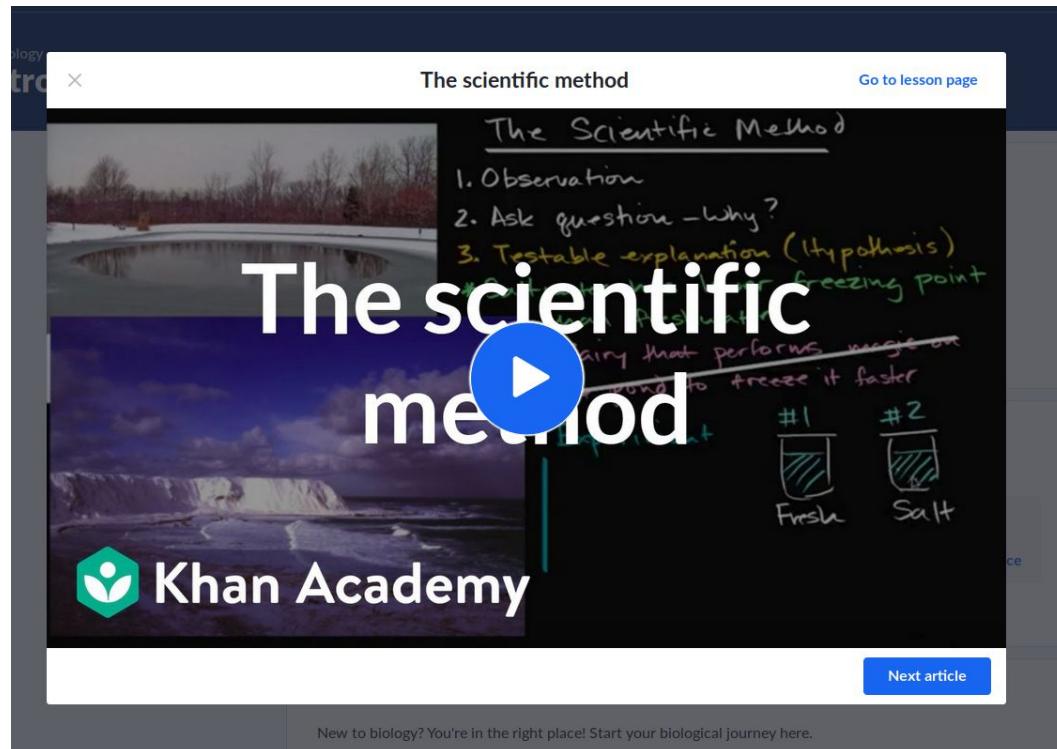
Learn about Shakespeare's plays and their influence through a focus on emotions such as love, hate, and jealousy.



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of ADELAIDE

About this course

Shakespeare's work has influenced the way we think about our relationships and ourselves. His plays are still as relevant today as when they were written almost 400 years ago.



Want to know more about Khan?



Types of Instructional Videos

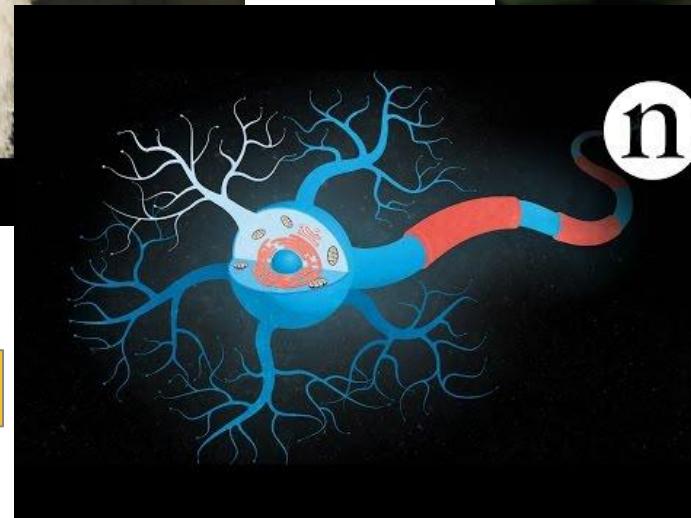
Repositories -Engaging with Videos -

Authenticity, Contextualization, Personal Addressing

Illustration of Natural Phenomena

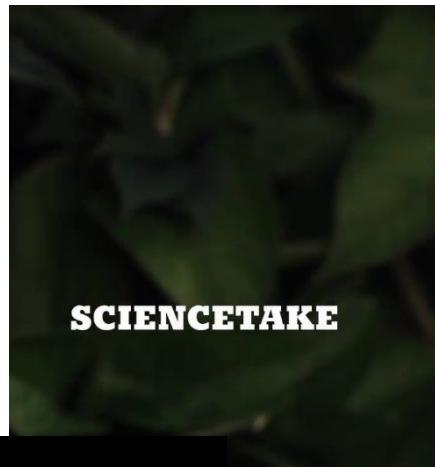


Research Journals & Video



RolandMoone 1 year ago

This is literally the best channel I've ever come across on Youtube. The amount of detail and the visual complements are just incredible.



Research article

The dynamic role of the ilio-sacral joint in jumping frogs

Christopher T. Richards, Enrico A. Eberhard, and Amber J. Collings

Published: 01 September 2018 | <https://doi.org/10.1098/rsbl.2018.0367>



<https://www.nytimes.com/video/sciencetake>



Ahmed ElSeragy 1 year ago

why does this happen exclusively to motor neurons?



Christian Jesús Rodriguez Huaco 1 year ago

I'm happy because everyday more people are searching for a cure for ALS. Thanks Nature for your video, was very illustrative.

Types of Instructional Videos

Repositories -Engaging with Videos -

Human Behavioural Experiments

Social Conformity



Awkward Stare



Still Face



Activity 1

Experiment

How to take out your gloves safely in the Lab

Prepare a short video demonstration showing how to take off the gloves using the following materials:



Instructions

- Group 1: Image
- Group 2: Written
- Group 3: Audio



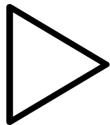


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- A Grasp the outside edge of the glove near the wrist and peel away from the hand, turning the glove inside-out.
 - ◆ Hold the glove in the opposite gloved hand.
- B Slide an ungloved finger or thumb under the wrist of the remaining glove.
- C Peel the glove off and over the first glove, making a bag for both gloves.
 - ◆ Put the gloves in the garbage.

Audio Instructions





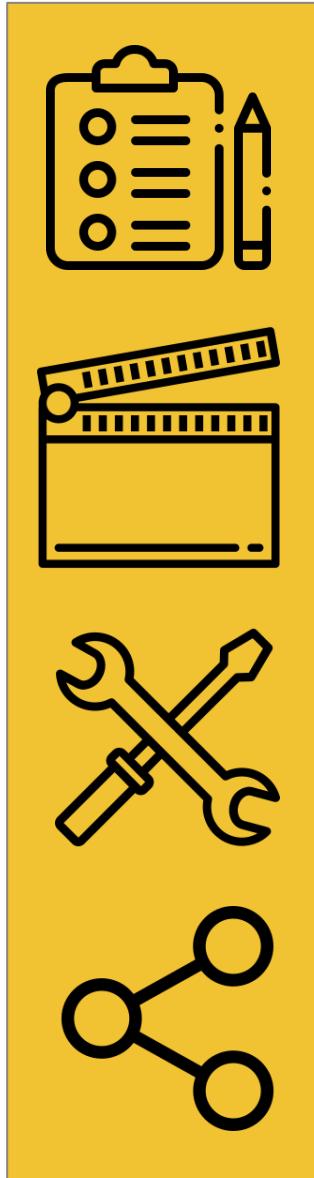
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Instructional Video -The Process of Creation



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1

Organize your Content
and its Delivery

2

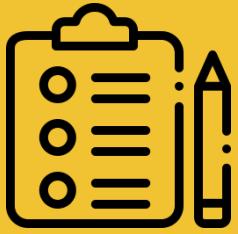
Record

3

Edit

4

Share



1

Organize your Content and its Delivery

- Audience
- Define Learning Objectives and Goals and keep your movies **goal-oriented**.
- **Less is more**, keep your videos short.
- Decide on what **visuals to use** (eg. screen capture, live action, narrated slides, or combination)
- ***To script or not to script***

Should you **outline and have bullet points of all the main ideas** you want to discuss? Should you **script out every single word** you plan to say? Should you just **wing it?**



Examples

Scripts & Storyboards



Video Production Storyboard

Title:

Total Time:

Scene #	Timing:	Scene Title:
Narration: voiceover/audio track text/music/sound f/x	On-Screen: description/sketch/digital image of scene image/video clip	
Special F/X:		
Notes:		
Transition to Next Scene:		
Scene #	Timing:	Scene Title:
Narration:	On-Screen:	



D2L Intro Video
Script.docx

Figures_drafts

If you can't see my changes (minor), here are some screenshots:

15

Dialogue

What about your courses you ask? Well, accessing your courses is as simple as clicking on the course selector waffle icon from the home screen and selecting your course. From there you are auto-magically directed to your course that you clicked on. Alternatively, you can always access your courses from the mini-bar as well.

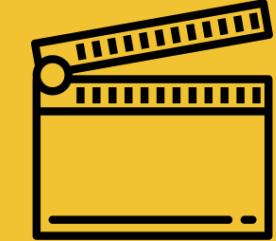
Dialogue

With so much that D2L can do, and you will do in D2L, you may need more help regarding its intricacies, and don't worry, we got you covered. For help regarding anything D2L the best place to find it is "<http://elearn.ucalgary.ca>".

Once again, welcome to D2L, your learning environment platform at the University of Calgary.
All the best on your learning adventure!



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2 Recording

- Choosing a recording **location** [AV Suites \(TFDL\)](#), [One Button Studio \(TFDL\)](#), Design Studio (TI) [Digital Media Commons TFDL](#)
- Selecting **AV equipment**
- Selecting the **software**
[UCalgary software](#), [other options](#)
- Preparing your **computer**
- Do's and don'ts
- Handling mistakes and redos



In Action

D2L Video: Change your Course Banner

A short video tutorial needs to be done to show users how to change the Course Banner.



Let's do it !

Activity 2

Learn editing tools



Watch the video, identify 3 things to improve in the video and write them on the whiteboard.



In Action

When it goes bad...

The screenshot shows a D2L course page with the following elements:

- Header:** D2L Sandbox - Learning Technologies
- Course Home:** Course Home, Content, Calendar, Communication, Assessments, My Tools, SWS Course
- Section Headers:** Name, Updates, Expenses, Important links.
- Name Section:** There is no name to display. Create a new item.
- Updates Section:** 2 Unread Discussion Posts, 1 New Discussion Submission, 1 Unread Quiz Attempt.
- Important Links:** For Students
 - Rudin Student Centre
 - Find institutions at the homepage
 - Complete your LSWB survey
 - Library

Activity 2

Learn editing tools



Write 3 mistakes on
the whiteboard.

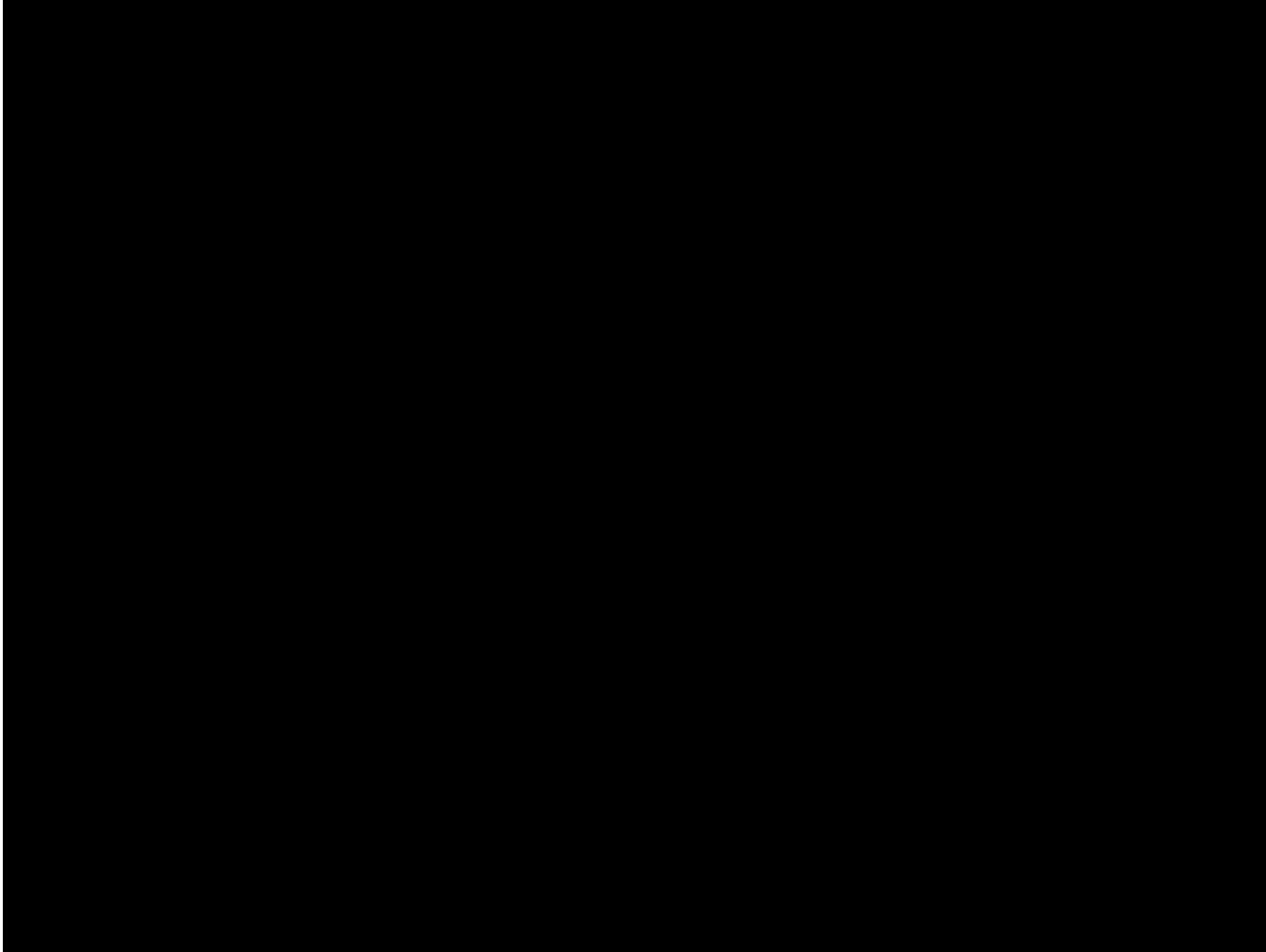


In Action

Good Recording...



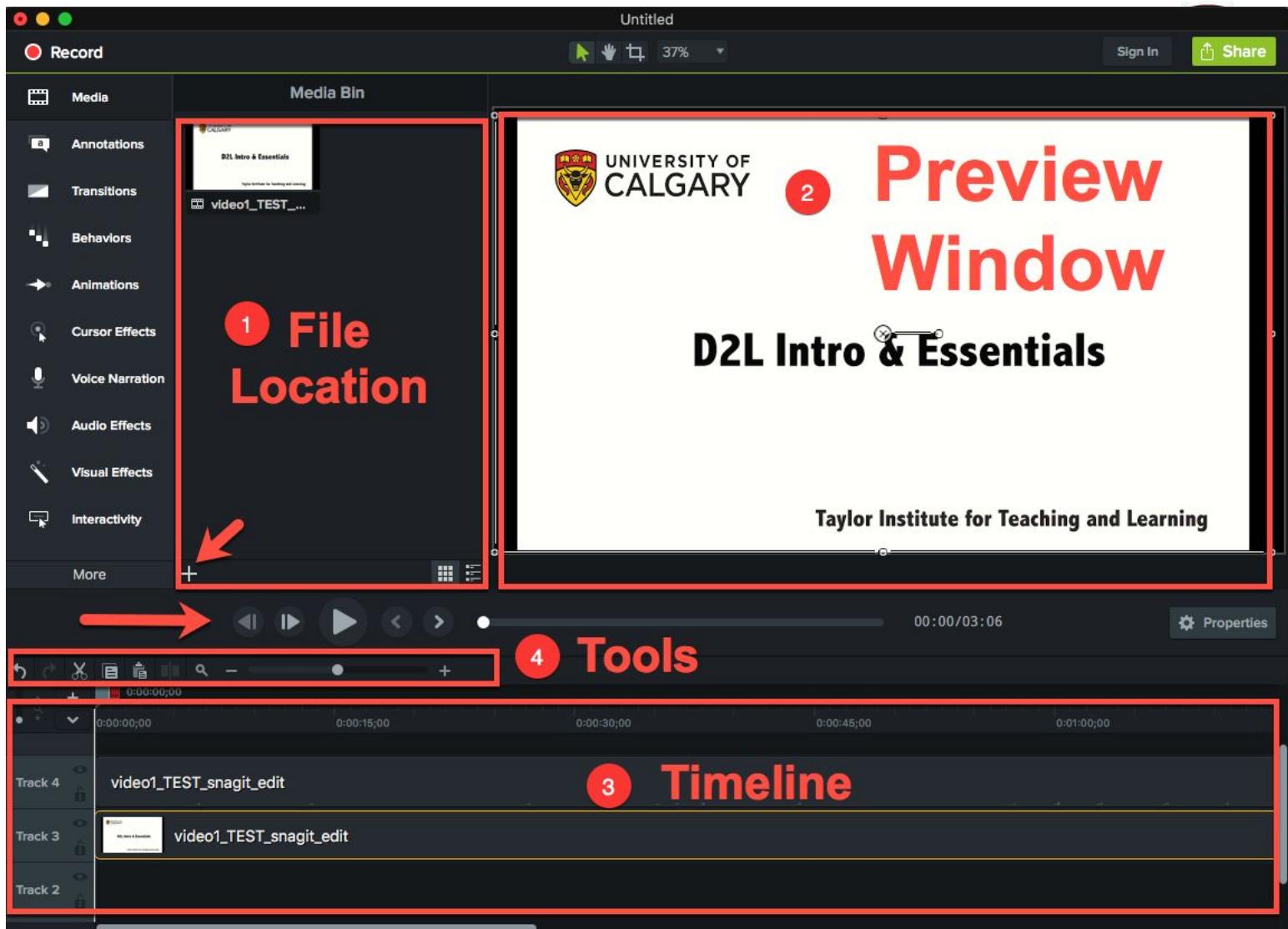
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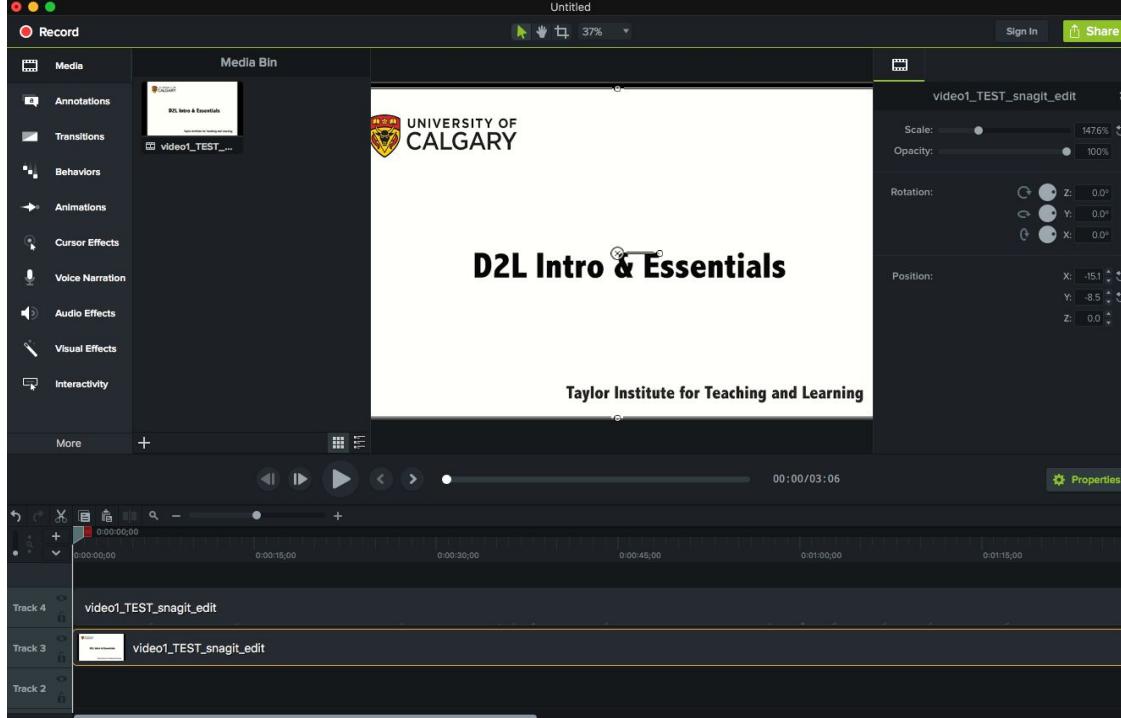


3 Editing

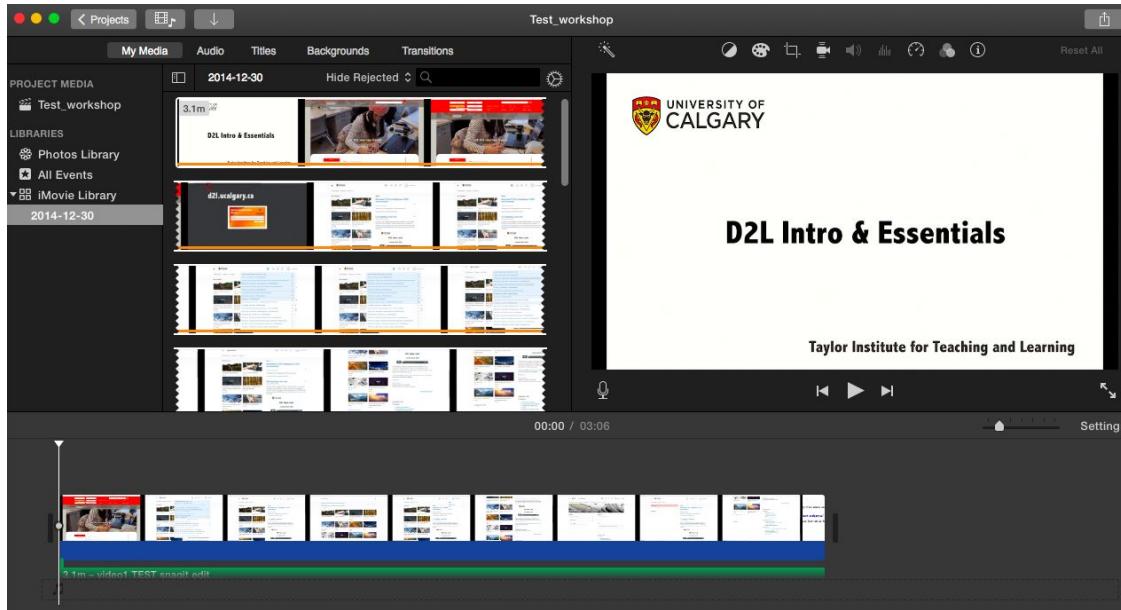
- 1 File Location
- 2 Preview Window
- 3 Timeline
- 4 Tools



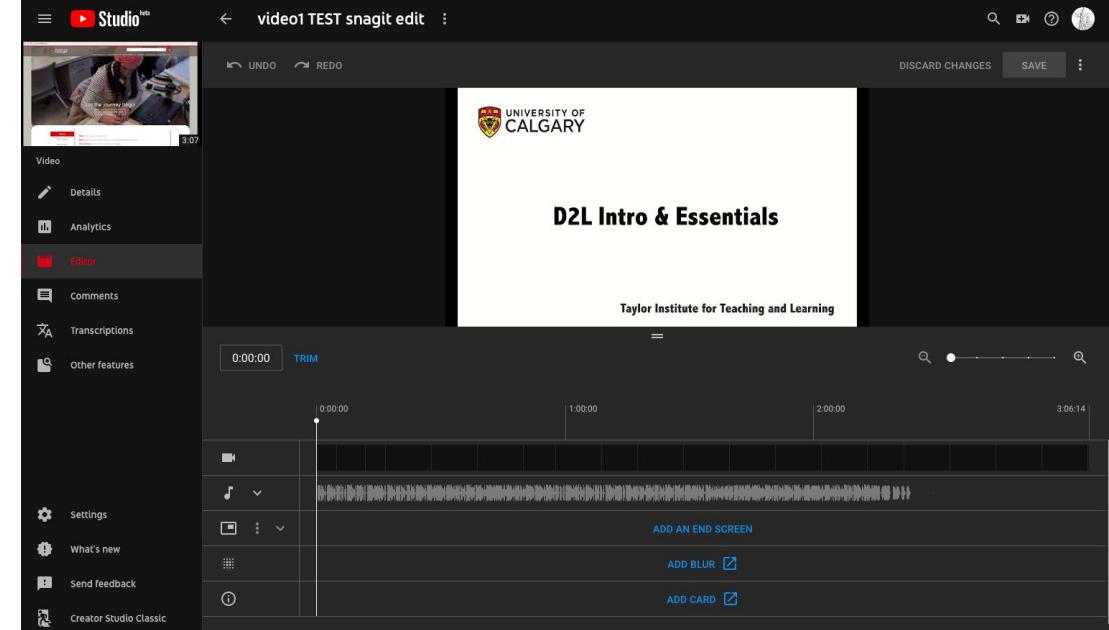
Camtasia



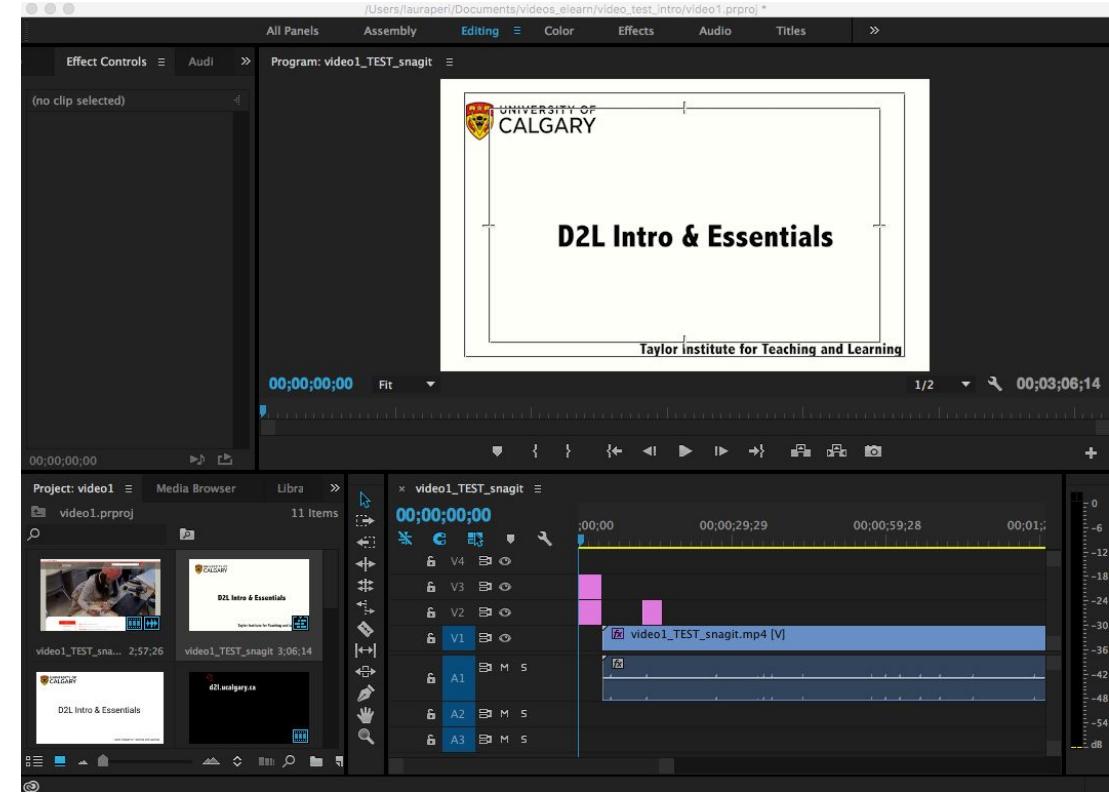
iMovie



YouTube



Adobe Premiere



Shared Video



Final Video version shared through Vimeo



[Students](#) / [D2L](#) / [Adobe Connect](#) / [Top Hat](#) / [Adobe Presenter](#) / [ePortfolios and Blogs](#) / [Miscellaneous](#)

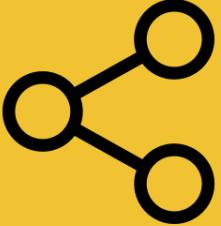
What are you looking for? Enter keywords here

SEARCH



How to Change the Course Banner in D2L





4

Sharing

- File Format and size (file compression)
- Platforms: Personal Repository / website, D2L, Institutional video platform



- Privacy options
- Copyright,
<https://www.youtube.com/intl/en-GB/yt/about/copyright/fair-use/>
<https://help.vimeo.com/hc/en-us/articles/224817827-What-is-fair-use->

Media Creation Resources Help

Resources

AV Spaces and Technology Equipment at UCalgary

AV Recording Suits at TFDL:

<https://library.ucalgary.ca/avsuites>

One Button Studio:

<https://workrooms.ucalgary.ca/space/9545>

Design Studio at Taylor Institute for Teaching and Learning: <https://taylorinstitute.ucalgary.ca/>

Contact us to book the space!

AV Equipment for lend at TFDL:

<https://workrooms.ucalgary.ca/equipment?lid=1689>

Software

University Software Distribution: A variety of software is available to members of the university community. The software license agreement between the vendor and the University of Calgary will determine whether the software can be installed on university-owned computers (managed or unmanaged) or a person's personally-owned computer. For more information please visit:

<https://iac01.ucalgary.ca/SDSWeb/>

Video Editing

Adobe Premier (UCalgary licensed software)

Camtasia (available at Design Studio):

<https://www.techsmith.com/video-editor.html>

iMovie (comes with MacOS):

<https://www.apple.com/ca/imovie/>

OpenShot (Free):

<https://www.techsmith.com/video-editor.html>

Screencast

Snagit (UCalgary licensed software)

Camtasia (available at Design Studio):

<https://www.techsmith.com/video-editor.html>

OBS Studio (free): <https://obsproject.com/>

VLC (free): <https://www.videolan.org/vlc/index.html>

QuickTime Player (free on MacOS):

<https://support.apple.com/quicktime>

Xbox Game Bar (free on Windows):

<https://www.lifewire.com/easy-windows-screencasts-4118100>

Screencast-o-matic (free): <https://screencast-o-matic.com/>

Image Editing

Adobe Photoshop (UCalgary licensed software)

Gimp (free): <https://www.gimp.org/>

Graphics Editing & Design

Inkscape (free): <https://inkscape.org/>

Adobe Photoshop, Illustrator, Spark (UCalgary licensed software)

Audio Editing

Some basic tools are built-in within the video editing software.

Audacity (free): <https://www.audacityteam.org/>

Animation Software

PowToon (free online web-based):

<https://www.powtoon.com/home/>

Blender (free): <https://www.blender.org/>

Adobe Animate, After Effects (UCalgary licensed software)

Video transcoders

Handbrake (free): <https://handbrake.fr/>

FFmpeg (free): <https://www.ffmpeg.org/>

Educational Video Resources

Video Repositories

NYtimes:

<https://www.nytimes.com/video/scientake>

BBC: <http://www.bbc.co.uk/archive/feynman/>

Cornell University: <http://www.cornell.edu/video/>

OER Commons: <https://www.oercommons.org/>

OPEN YALE Courses: <https://oyc.yale.edu/>

Online Courses Platforms

OpenLearn: <https://www.open.edu/openlearn/>

MIT Open Courseware:

<https://ocw.mit.edu/courses/find-by-topic/>

MOOC: <http://mooc.org/>

KHAN Academy: <https://www.khanacademy.org/>

Linkedin Learning (free access for UCalgary staff member and faculty):

<https://www.ucalgary.ca/hr/linkedin-learning>

Lynda: <https://www.lynda.com/>



Copyright

The University of Calgary encourages access to works while ensuring that the rights of creators are respected in accordance with the Copyright Act. It is the responsibility of each individual to ensure compliance with copyright regulations. For more information please visit:

<https://library.ucalgary.ca/copyright>

Other sources:

<https://www.youtube.com/intl/en-GB/yt/about/copyright/fair-use/>

Selected Literature

Moss, R., Video, the educational challenge, Croom Helm Ltd, London and Canberra, 1983.

Allam, C., M., Vanbuel, M., Verstegen, S., Young C., Handbook on Digital Video and Audio in Education, Creating and using audio and video material for educational purposes, The Videoaktiv Project, 2006.

https://elbd.sites.uu.nl/wp-content/uploads/sites/108/2017/05/2184_9_VideoAktivHandbookfin.pdf

Mireille Bétrancourt, Kalliopi Benetos, Why and when does instructional video facilitate learning? A commentary to the special issue “developments and trends in learning with instructional video”, Computers in Human Behavior, Volume 89, 2018, Pages 471-475.

Logan Fiorella, Richard E. Mayer, What works and doesn't work with instructional video, Computers in Human Behavior, Volume 89, 2018, Pages 465-470.

Björn B. de Koning, Vincent Hoogerheide, Jean-Michel Boucheix, Developments and Trends in Learning with Instructional Video, Computers in Human Behavior, Volume 89, 2018, Pages 395-398.



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*"My own point of view—which, however, does not seem to be shared by most of the people who worked with the students—is pessimistic. **I don't think I did very well by the students.** When I look at the way the majority of the students handled the problems on the examinations, **I think that the system is a failure.** Of course, my friends point out to me that there were one or two dozen students who—very surprisingly—understood almost everything in all of the lectures, and who were quite active in working with the material and worrying about the many points in an excited and interested way."*



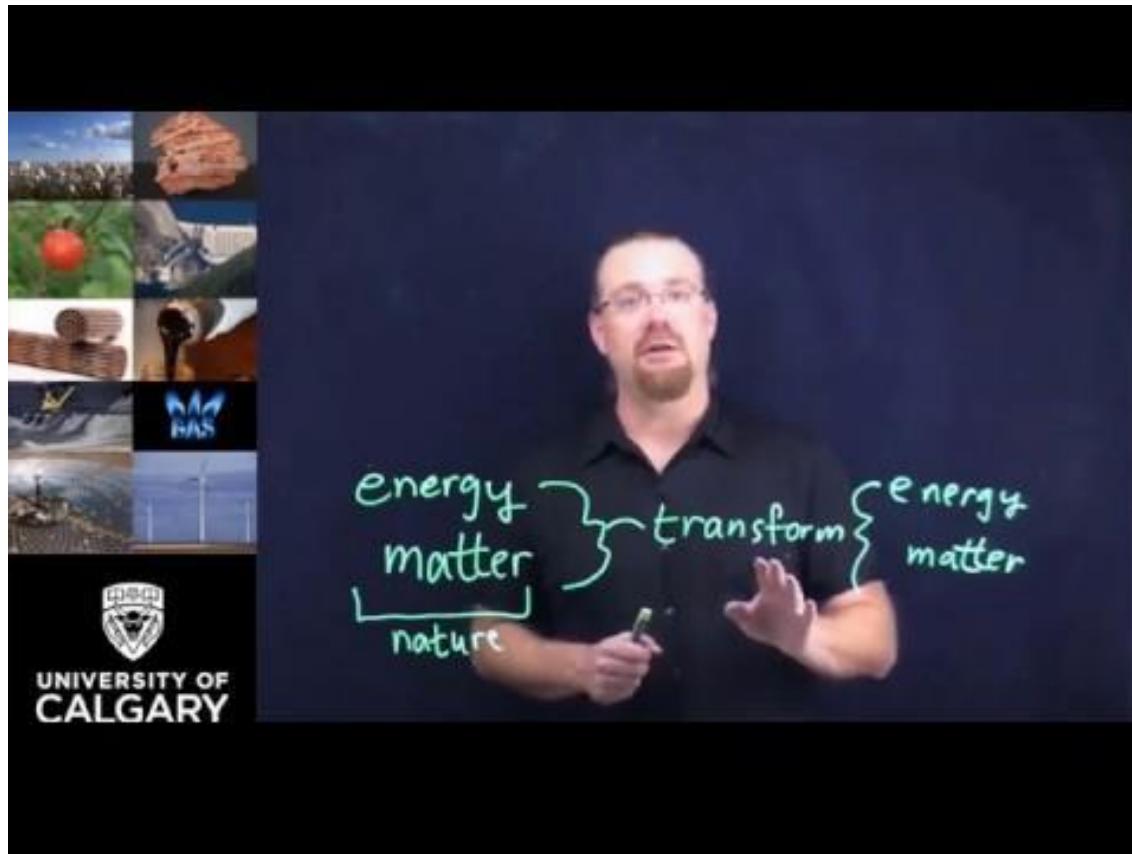
*"Perhaps my lectures can make some contribution...
Perhaps they will have fun thinking them
through—or going on to develop some of the ideas
further."*

Richard Feynman, Lectures on Physics, Preface, June 1963.





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THANK YOU!



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