

Using video to
enhance course
content

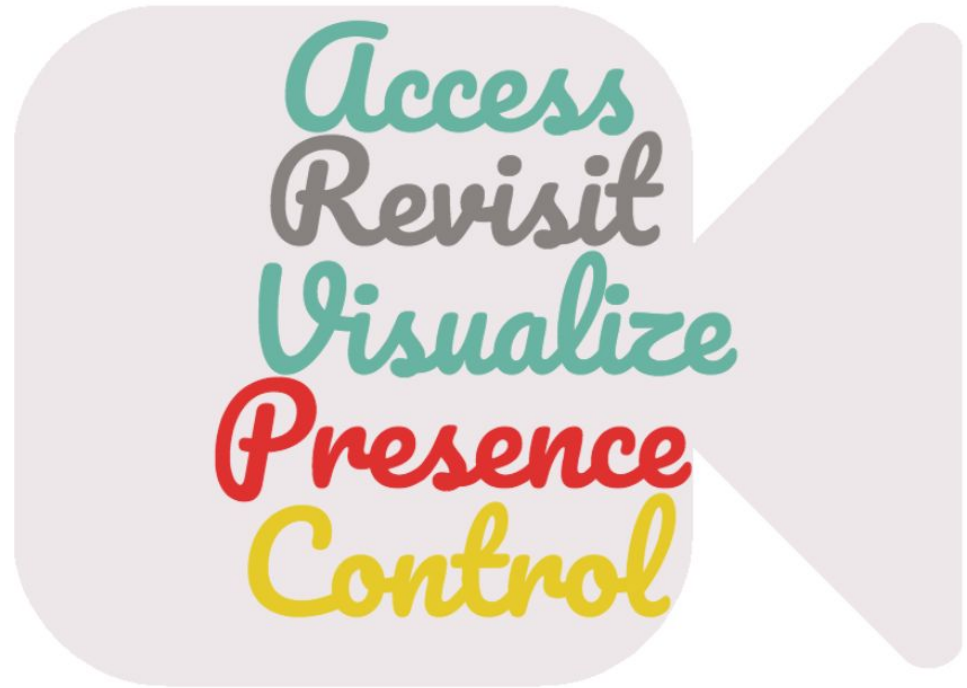
*Andrea
Arias-Rodriguez*

NSM IT

Spring 2017



Why Use Video?



How can I Integrate Video?

Into the
Classroom



Stimulate engagement,
comprehension &
retention

Connect concepts to
real world examples



Generate discussions
and set the tone of the
class

Illustrate complex
topics



Bring to the classroom:
places, guests, case
studies, experiments

Address different
learning preferences



Develop media literacy
& critical thinking

How can I Integrate Video?

Into
Research



Promote new ideas

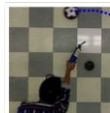
Explain Concepts



Keep track of
events



Illustrate processes,
tutorials, demos,
guides



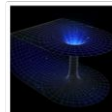
Record time lapses



Video abstracts



Show simulations



Where do I Start?



1. Identify Learning Objectives

What is it that you want your students to learn?

Is the video to introduce new concepts, review old ones, or extend something that happened in class?

Is the video to provoke thoughts and promote critical thinking, or is it to provide simple, factual information?

Week 1: May 15-May21

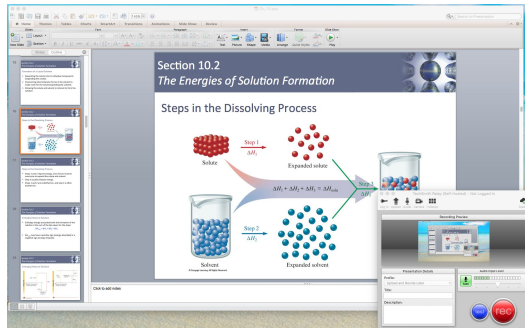
Week 1 Videos

Video Title	Learning Objectives	Notes and Readings	Video	Assignments
Lecture 1.1: The Methodology of Economics	<ul style="list-style-type: none">• Define Economics• Distinguish between normative and positive analysis	<ul style="list-style-type: none">• What is economics?• What is a fact?• What is needed in order to identify which facts to look at and which facts to ignore?	 Watch Video	Discussion: Identify and share examples of normative and positive analysis

2. Select a Video-based Content Format



**Your Own
Produced
Video**



**Narrated
PowerPoint**
Lecture Capture



**Existing
Video Clips**

2. Select a Video-based Content Format

**Your Own
Produced
Video**

Customized!



2. Select a Video-based Content Format

**Narrated
PowerPoint
Lecture Capture**

*Valuable review
materials!*

The screenshot displays the University of Houston's ICS Videos platform. On the left, a course page for '2016FA-DEVG-TRAIN1000-Arias Developmental Shell' is visible, with a 'Lecture Recordings' link circled in red. An arrow points from this link to the 'ICS Videos' interface. The 'ICS Videos' interface features a navigation bar with 'Browse Videos', 'Search Videos', 'FAQs', 'About', and 'Logout'. Below this, a search bar is set to 'BIOL1334 Human An...'. A table lists 17 lecture recordings with columns for 'No.', 'Lecture Name', and 'ID'. The first row is highlighted. To the right, a video player is open, showing a video titled 'Levels of organization in the body'. The video content includes a diagram of biological organization levels and a list of definitions: Chemical Level, Cellular Level, Tissue Level, Organ Level, System Level, and Organismal level. The video player includes a 'Speed 1x' control, a 'Search Inside the Video' field, and a 'Download' button for 'Video' and 'Audio'. A progress bar at the bottom shows time markers at 00:01, 03:17, 06:31, 09:15, and 13:33.

No.	Lecture Name and ID
1	1334_lecture01_0606
2	1334_lecture02_0607
3	1334_lecture03_0608
4	1334_lecture04_0609
5	1334_lecture05_0610
6	1334_lecture06_0614
7	1334_lecture07_0615
8	1334_lecture08_0616
9	1334_lecture09_0620
10	1334_lecture10_0622
11	1334_lecture11_0623
12	1334_lecture12_0624
13	1334_lecture13_0627
14	1334_lecture14_0629
15	1334_lecture15_0630
16	1334_lecture16_0705
17	1334_lecture17_0706

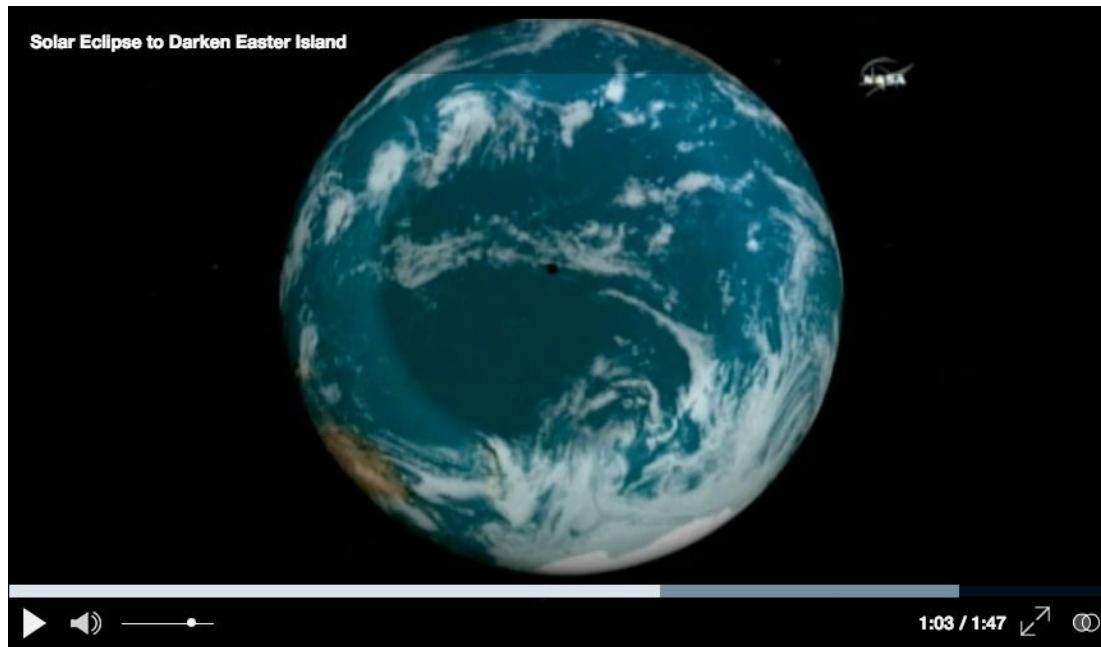
Levels of organization in the body

- Chemical Level** – the atoms and molecules that make up the basic components of the cell.
- Cellular Level** – the basic building blocks of tissues. Cells have distinct functions with their respective unique position with the body.
- Tissue Level** – made up of similar cells with a common function.
 - 4 basic types: Epithelial, Muscle, Connective, Nervous
- Organ Level** – two or more tissue types that perform a specific function for the body that no other organ can perform
- System Level** – multiple organs that work together to accomplish a common purpose
- Organismal level** – represents the sum total of the structural levels working together to promote life.

2. Select a Video-based Content Format

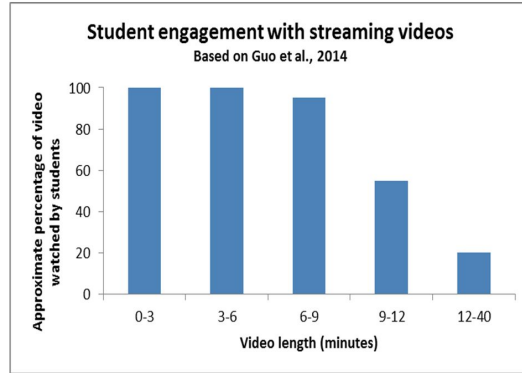
Existing Video Clips

Quick and Easy!



3. Apply Best practices

Chunk Information (5–7 m)

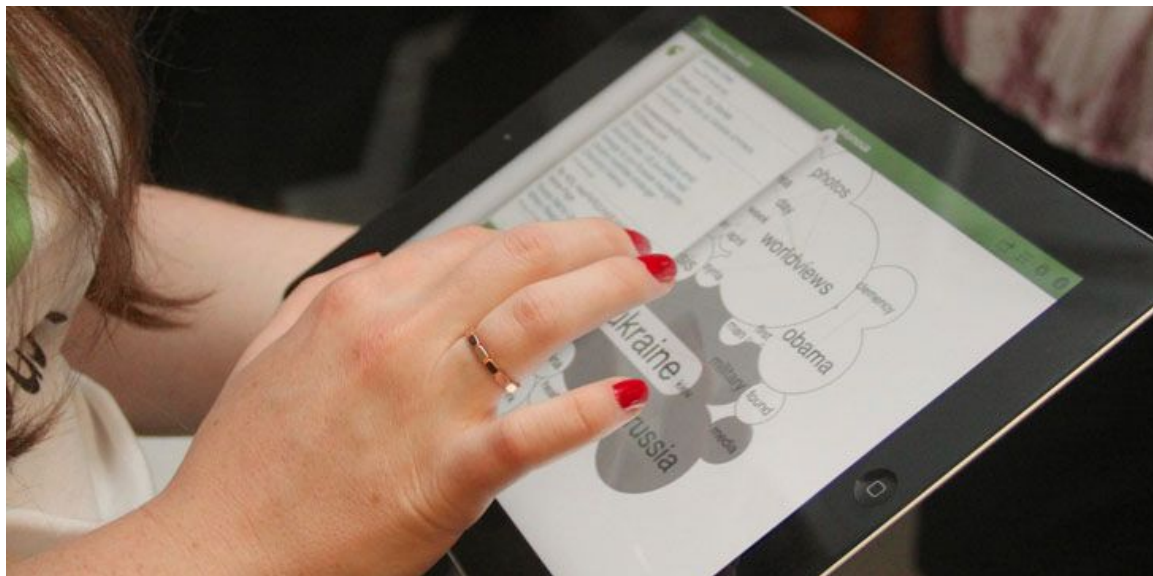
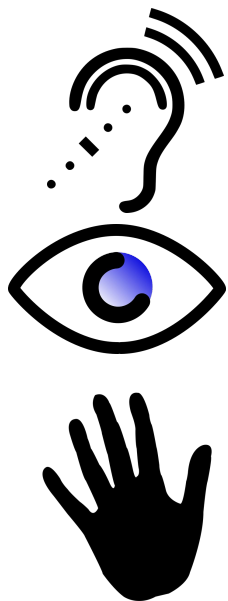


Effective educational videos
By Cynthia J. Brame, CFT Assistant Director
<https://cft.vanderbilt.edu/guides-sub-pages/effective-educational-videos/>



3. Apply Best practices

Accommodate different learning styles



3. Apply Best practices

Include assessments

Lesson 2: 3D Printing Technologies
Introduction to Lesson 2: [3Dprinting\\$lides.ppt](#)
Learning Objective: Understand the advantages and limitations of each 3D printing technology

Lesson 2: 3D Printing Technologies
The lesson 2 Power Point above refers to several video clips you will watch. You will find links to all the videos below:

2.1 -3D Printing - Dual Extrusion Duration: (2:24)	2.2 -3D printing with powder/SLS technology Duration: (1:30)	2.3 -3D printing with ABS Plastic Duration: (12:46)
Watch Video	Watch Video	Watch Video

Lesson 2 Reading

Lesson 2 Discussion Board
Discuss the advantages and limitations of each 3D printing technology.

Lesson 1 and 2 Quiz

Lesson 2 Assignment

3. Apply Best practices: Technical considerations

Select the best recording option for your video



Recording Tools	Cost
Screencast-O-Matic	Free with limitations \$15/user per year to remove limitations.
TechSmith Relay	Free for UH Faculty
Office Mix	Free add-on to PowerPoint Download Office Mix

3. Apply Best practices: Technical considerations

When using PowerPoint in your lecture capture recordings:

- Consider using an annotation tablet
- Provide detailed instructions for accessing and playing lectures

The screenshot shows a PowerPoint slide with the following content:

- Propagation of cells on growth media.
 - Liquid medium
 - for propagation of lots of cells
 - ↳ Biochemical analysis
 - ↳ protein or DNA isolation
 - Solid medium
 - ↳ for pure culture isolation

Two images are included: a flask with red liquid and a petri dish with a green agar surface. Handwritten notes next to the images read: "↳ harvest culture via centrifugation".

At the bottom of the slide, there is a video player control bar and a recording interface overlay. The recording interface includes a "Recording Preview" window, "Presentation Details" (Profile, Title, Description), and "Audio/Video Levels" controls with "Mute" and "Rec" buttons.

3. Apply Best practices: Creating Accessible Videos

ADA: Captions + Transcript + Audio description + Accessible Media Player

The screenshot shows a video player interface. On the left, a slide titled "Glial Cells" lists general functions and types found in the CNS and PNS. A diagram below the text shows the peripheral and central nervous systems with various glial cells. A play button is overlaid on the diagram. On the right, a transcript overlay is visible, with a green circle highlighting a specific line of text: "as I said they're glue. There are a whole bunch of different types, they don't conduct".

Glial Cells

- General functions
 - Do not conduct nerve impulses
 - Communicate to nerves & other glial cells via chemical messengers
 - Serve as connective tissue
 - Maintain the extracellular environment
- Four types found in CNS
 - Astrocytes – physical and chemical support; forms BBB; acts a neural scar tissue
 - Oligodendrocytes – form myelin sheaths
 - Microglia – immune defense cell
 - Ependymal cells – lines central cavities of ventricles; produces ECF; neural stem cell
- Two types found in PNS
 - Schwann cells – form myelin sheaths
 - Satellite cells – physical support

Transcript

cheeseburger what is my response?

71:42 salivate. So the effect is a result of the efferent neurons

71:50 the activity it done down. Glial cells

71:55 as I said they're glue. There are a whole bunch of different types, they don't conduct

71:59 impulses, they serve as a connective tissue of the brain

72:02 so their job is to maintain the extracellular environment

72:05 because there are four types and then central nervous

72:10 system and there are 2 types that are found in the peripheral nervous system, they have really weird

72:13 name and the function wide are kind of like "I'm not sure what just"

72:18 well simply put we named them for what they look like

and then we figure out their functions

Outsource (Fee)	Do it yourself (Free)
<ul style="list-style-type: none">• Automatic Sync Technologies• 3PlayMedia• Cielo24	<ul style="list-style-type: none">• Amara.org• Subtitle Horse• YouTube Caption Editor

3. Apply Best practices: Pedagogy considerations

- Watch & correct
- Provide content related questions or other learning activities & count them in students' grades
- Evaluate your video

Theory

Rayleigh-wave vertical-displacement
 $V_s=300.0\text{m/s}$

Depth (meters)

Relative displacement

Legend:

- 40.0Hz
- 24.0Hz
- 16.0Hz
- 12.0Hz
- 10.0Hz
- 8.0Hz
- 6.0Hz
- 4.0Hz

2:29 / 14:25

3. Apply Best practices: Evaluating Video Content



The Learning Autobiography (LAB)

Approximately 2400 years ago, Plato wrote The Allegory of the Cave in his well-known work *The Republic*. This allegory has stood the test of time in presenting a philosophy of education. As you look back at your prior educational experiences this week and as you look ahead, consider the meaning this allegory has for you. What impact has education had on your life and what meaning might your Ottawa journey have for you?

Player Controls




Plato's Allegory of the Cave - Alex Gendler

Duration: (4:33)

User: tededucation - Added: 3/17/15

YouTube URL: <http://www.youtube.com/watch?v=1RWOpQXIttA>

COURSE MEDIA RUBRIC

Criteria	Outstanding
Relationship to Course 	<input type="checkbox"/> Clear title <input type="checkbox"/> Embedded <input type="checkbox"/> Outline for reference <input type="checkbox"/> Explicitly links to a related course resource

3. Apply Best practices: Evaluating Video Content



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COURSE MEDIA RUBRIC

Criteria

Outstanding

Pace / Tone



- Maintains student interest (under 6 min)
- Interesting** hook: facts or graphics.
- Instructor conveys a personal feel

3. Apply Best practices: Evaluating Video Content



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COURSE MEDIA RUBRIC

Criteria	Outstanding
Narration 	<input type="checkbox"/> Voice is clear , expressive, enthusiastic <input type="checkbox"/> Spoken words match text and/or graphics <input type="checkbox"/> Meaningful introduction and a summary at the end

3. Apply Best practices: Evaluating Video Content



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COURSE MEDIA RUBRIC

Criteria	Outstanding
 Visuals	<input type="checkbox"/> Clear on-screen text <input type="checkbox"/> Contains a variety of dynamic visuals or shot types

3. Apply Best practices: Evaluating Video Content



The Learning Autobiography (LAB)

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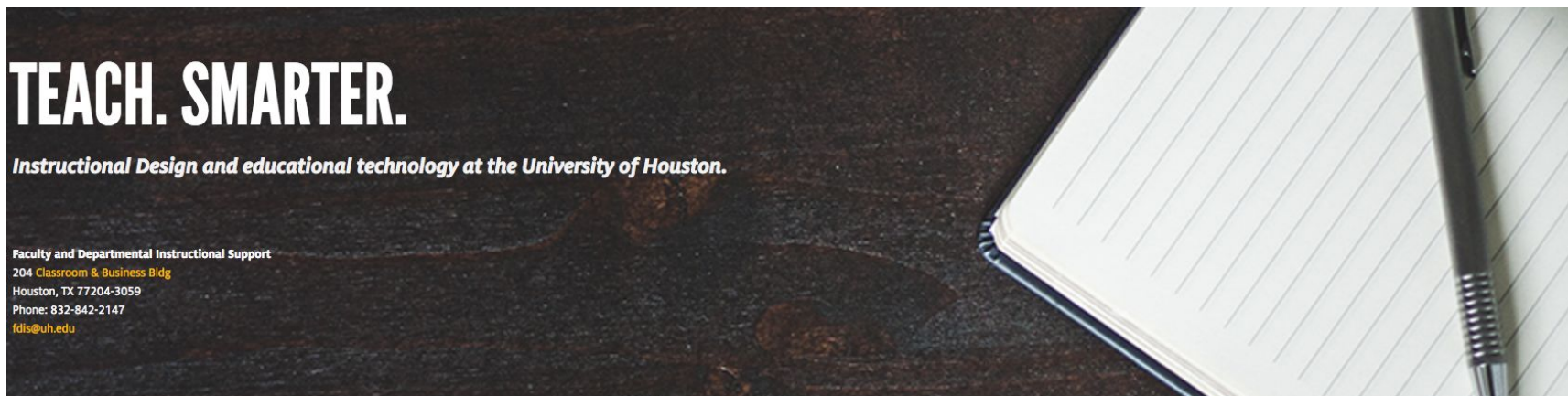
YouTube URL: <http://www.youtube.com/watch?v=1RWOpQXIttA>

COURSE MEDIA RUBRIC

Criteria	Outstanding
Production 	<input type="checkbox"/> Voice volume is consistent <input type="checkbox"/> Free of background noise <input type="checkbox"/> Video resolution is high definition <input type="checkbox"/> Accurate closed captions are included

3. Apply Best practices: Meet with an Instructional Designer!

To to determine the best use for media in your course,
we encourage you to meet with an Instructional Designer!



Summary

- Videos can be an efficient learning tool!
- To get started using video-based content in your online course:
 1. Identify what your learners need to know
 2. Select the best video-based content format for your lectures
 3. Apply best practices when preparing media content.
- Follow the three practices above and you will be on your way to enhance your course content & keep learners engaged!



Questions?

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Thank you

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