Video Resources cheat sheet

Web resources for video clips:
You don't have to pay for them, just look for the "download a comp" link. They will be low resolution and watermarked, but that is OK for this class (not for a show!). Some may ask for you to create a login, but most you can just browse.

pond5 – http://www.pond5.com/stock-video-footage/1/*.html
istock: http://www.istockphoto.com/video
Shutterstock: http://footage.shutterstock.com/
Getty Images: http://www.gettyimages.com/footage
There are many more...

Browser plug-ins to help you save You Tube (etc) videos:
Keepvid: http://www.keepvid.com
NetVideoHunter (firefox plugin, adds an icon at the top right of the browser for downloading videos & music): https://addons.mozilla.org/en-US/firefox/addon/netvideohunter-video-downloade/
A how to page!

The **US National Archives** has a lot of older films online. You simply select "moving images" under the "Type of Archival Material field" on the "advanced search" page.
http://research.archives.gov/search?v%3Asources=opaboosts&query=&v%3aframe=form&form=opa-advanced&

FORMAT ISSUES:
Many of the Archives videos seem to be in "WMV" (Windows) format. So you may need to download "Flip4Mac" which lets you play WMV's on Macs. And if you buy the $29 version you can then covert these into .mov files.
http://www.telestream.net/flip4mac/

And for PC users, here is Quicktime 7 for Windows:
http://support.apple.com/kb/DL837

Video is a tricky thing:
The Wikipedia Video page (lots of links!): http://en.wikipedia.org/wiki/Video

The different video standards as a chart:
http://upload.wikimedia.org/wikipedia/commons/f/f0/Vector_Video_Standards4.svg

Software to look at:
Millumin: (kinectMask2Syphon is also available here):
www.millumin.com

Cue Lab:
http://figure53.com

Max/MSP/Jitter
www.cycling74.com

Touch Designer (PC only) – very powerful!
http://www.derivative.ca/

openFrameworks
http://www.openframeworks.cc/

Hardware Information:

System Design is the process of combining the budget realities, available equipment and the venue with the Media Design concept, into a system of projectors, media servers and screens/surfaces that create the stage picture you want. Additionally this system needs to flexible enough to adapt to changes made during the rehearsal process. The first step is figuring out what type of projectors your design & venue call for.

Aspect Ratios Explained:
    Wikipedia Page

Good Overview Site (main page for links below):
    http://htrgroup.com/main.php

Projector Placement Considerations:
    Throw Ratio and Zoom Range
    Min and Max Throw Distance
    Calculating Throw Ratio from Focal Length
    Lens Shift

Image Perspective Issues & Resolution:
    Keystone Correction
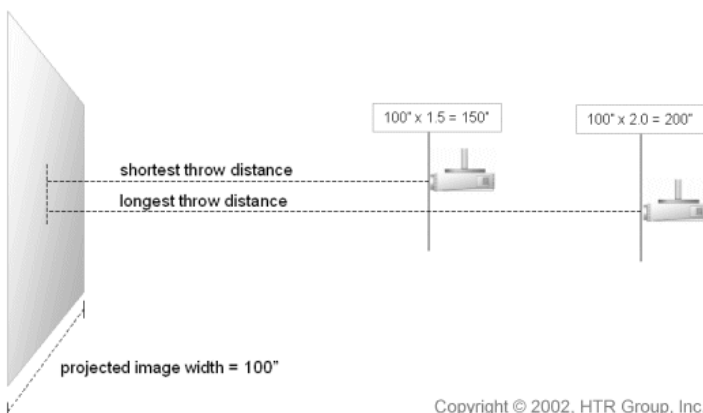
Using Mirrors to reduce throw distance:
    Mirror's explained

LUMENS – FOOTCANDLES – FOOTLAMBERTS (oh my):
    Calculating Screen Brightness
    Sufficient Brightness

1.33 or 4:3
Standard aspect ratio and standard-definition video

1.66:1
Aspect ratio used for most European theatrical showings

1.78:1 or 16:9
Standard aspect ratio for high-definition video

1.85:1
Aspect ratio used for most U.S. theatrical showings since the 1950s

2.39:1
Aspect ratio of current anamorphic (wide-screen) theatrical showings

2.75:1
Aspect ratio of Ultra-Panavision 70

4.00:1
Rare use of Polyvision (three 35mm 1.33:1 projected side by side) only used in Napoléon (1927)

Layered comparison of different aspect ratios

100" x 1.5 = 150"
100" x 2.0 = 200"

shortest throw distance
longest throw distance

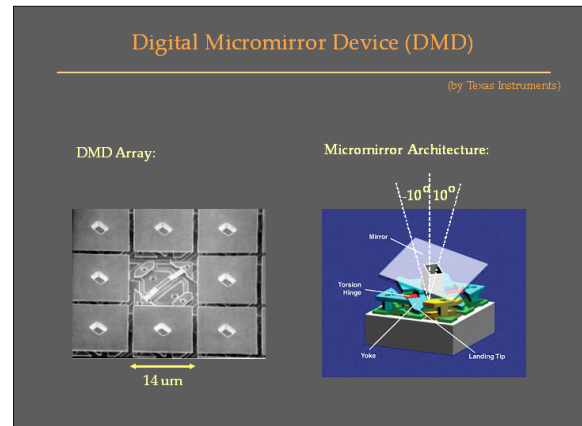projected image width = 100"

DLP Chips:
   Micro Mirrors:

DLP & LCD Chips Compared
   Link

LCD Projectors: Strengths
- Richer color dynamics for better results in rooms with ample ambient light
- Draw less power
- Throw less heat
- No color filter wheel = No "rainbow effect"
- Slightly quieter Seemingly sharper image on data

Quicktip: Figure you need about 30% more lumens in a DLP projector to hold its own with an LCD model.

DLP Projectors: Strengths
- Smoother video
- Smaller box
- Pixels far less visible, (although normally not an issue for business use)
- More "filmlike" on DVD and HDTV
- Generate "blacker" blacks
- Higher contrast

LCD Projectors: Disadvantages
- More visible pixels
- Some screen door effect on certain video images
- Physically larger – Even for the same number of lumens
- Poorer contrast
- Blacks come out lighter gray than DLP prrojectors

DLP Projectors: Disadvantages
- Rainbow effect bothers some
- More moving parts (color filter wheel)
- Color filter wheel often produces soft but audible whine
- Poorer reds and yellows at full power
- Color saturation
- Need more lumens than LCD, for rich colors, when dealing with ambient light

SCREEN ISSUES:

   http://en.wikipedia.org/wiki/Projection_screen

Screen Gain:
   http://www.projectorcentral.com/projector_screens_gain.htm

Roscoe RP Screen PDF:
   http://www.rosebrand.com/Downloads/Screens-info-RB.pdf

PROJECTOR "NATIVE RESOLUTION"
PIXEL RATIOS:
http://en.wikipedia.org/wiki/File:Vector_Video_Standards2.svg

** Importance of using Projectors "Native Resolution" to avoid "rescaling" in projector. **

Pixel Pitch – PPI (pixels Per Inch):
[Online Calculator](#)

SIGNAL TYPES:
http://www.curtpalme.com/CRTPrimer_17.shtm
composite:
http://en.wikipedia.org/wiki/Composite_video

HDMI (DVI) – Long Cable runs
http://forum.ecoustics.com/bbs/messages/34579/122868.html

CAMERA OPTICS:
Similar issues but in reverse.
http://www.cambridgeincolour.com/tutorials.htm

GREAT GENERAL IMAGING TECHNOLOGY RESOURCE:
[ITG–Beckman Institute](#)

Tom's Hardware – Great web resource:
http://www.tomshardware.com/

Video Digitizing information:
There are several ways to get video from inexpensive cameras into computers. Below are ideas broken down by cost.

Least Expensive: USB video input devices (~$100 per computer)

- Pinnacle Dazzle (USB video digitizer) $69.99 [LINK](#)
- Video Glide software $29.99 per computer [LINK](#)
    (a driver that needs to be installed on the computers to use the USB devices)

More Expensive – Better quality & great software included (~$200/computer)
        (Film school may already have these devices)
- Blackmagic Intensity – video capture cards, comes with great software - [LINK](#)
    Intensity Pro is a PCI card for Mac Pro Tower computers - $199
    Intensity Shuttle for USB 3.0 is an external box with USB 3.0 computers
        (NOT for USB 2.0 - so only new Laptops & iMacs) $199
    Intensity Shuttle for Thunderbolt – Same as above but for the new Thunderbolt
        interface $239