Key Concepts / Video Parameters

- **Codec** – The language in which the video data is written
  
  Example: H.264
  
  AKA: Compressor, format, encoder

- **File Type** – The package in which the video data is wrapped
  
  Example: .mov, .m4v, .avi, .mkv
  
  AKA: Wrapper, file extension

- **Dimensions** – How many pixels comprise the width and height of the image
  
  Examples: 1920x1080, 1280x720, 720x480
  
  AKA: Resolution, size
  
  Related concept: Aspect ratio (width:height, usually 16:9 or 4:3)

- **Frame Rate** – How many still images per second makeup the video image
  
  Examples: 15fps, 29.97fps, 30fps, 60fps
  
  Related concepts: Progressive vs. interlaced

- **Bit Rate** – How much data per second is available for video information
  
  Examples: 600kbs, 1500kbs, 10mbs, 200mbs

Different parameters are best for different scenarios. Optimum parameters for **playback on a local device** differ greatly from those for **streaming playback on the internets** or for those for **frame accurate video editing**.

**Common tools for video acquisition and transcoding**

  
  Use: Ripping DVDs, transcoding video files for streaming or local playback

- **MPEG Streamclip** - [http://www.squared5.com/](http://www.squared5.com/)
  
  Use: Video playback, video transcoding for streaming, local playback or editing, simple edits and trims

- **Easy YouTube Downloader and Video Download Helper** – google them
  
  Firefox extensions for downloading internet videos

- **Snapz ProX** - [http://www.ambrosiasw.com](http://www.ambrosiasw.com)
  
  Use: Screencapture software for Macs

  
  Use: Plays almost everything, including DVDs from all regions
Quick Guide to Ripping DVDs with HandBrake
for Teaching With Digital Media Spring 2011

Overview
HandBrake is a free program that helps you get video off of a DVD and onto your computer. The basic steps are to 1) Download and install HandBrake 2) Use it to rip your DVD 3) If you want to edit the ripped footage, convert it to an edit-friendly format using MPEG Streamclip.

Steps
1. Download and install HandBrake (and maybe VLC Player and MPEG Streamclip).

   HandBrake is available for PC and Mac, for free, at http://handbrake.fr
   Find the latest version for your platform, download and install it.

   HandBrake also requires that you download and install another free application called VLC Player which you can find at www.videolan.org/vlc

   If you plan to convert your ripped video into an edit-friendly format, you should also download and install MPEG Streamclip from http://www.squared5.com/

2. Rip DVD in HandBrake

   Insert your DVD into your computer. If your computer automatically launches a DVD Playing application, wait for it to load, and then quit this default application, being sure NOT to eject the DVD.

   Open the HandBrake application and choose the DVD you just inserted as the ‘Source’
   NOTE: When HandBrake launches, it prompts you to choose a ‘Source’, if HandBrake is already open and you are switching Sources, just choose ‘Open Source’ from the File menu to open the Source window. Once you’ve chosen your source, click ‘Open’.
Next you will need to make some settings choices about what and how to rip. Please refer to the image below:

**A) SOURCE** Choose the title you want to rip and the chapter ranges. ‘Title’ just refers to the fact that there may be multiple videos on a DVD (main feature, previews, special features, etc.). By default, HandBrake will choose the longest title on the Disc, assuming that you want to rip the Main Feature. By default, HandBrake chooses all the chapters of a title, but you can select a range by setting a start and end chapter to rip.

**B) DESTINATION** This is where you set the destination for your newly created file, and the name you want it to have. You can choose any name, but be sure not to alter the file extension (anything after the period .m4v, for example).

**C) PRESET** The preset drawer contains many helpful presets. If you do not see the preset drawer, choose to display it from the ‘Window’ menu. We recommend using the ‘Normal’ preset under ‘Regular’

**D) OUTPUT SETTINGS** Once you’ve selected a preset, be sure to leave most output settings as they are. One place you may make changes is in the ‘Subtitles’ window where you can choose a ‘subtitle track’ to include in your video. Note that the subtitle track will be ‘burned in’, meaning you won’t be able to turn it on and off in your final video.

**E) PRESS ‘START’ to begin your rip.**
3. Convert to Edit-Friendly Format with MPEG Streamclip

This step is only necessary if you plan to edit (or remix) your clip.

Open your clip in MPEG Streamclip.

Choose ‘File’ -> Export to Quicktime.

Set the ‘Compression’ to ‘Apple DV/DVCPro NTSC’ to work in standard definition OR set the compression to ‘Apple DVCPro HD 1080i60’ if you plan to mix this clip with High Definition footage. NOTE if you already know the compression settings, dimensions and framerate of an existing editing or remix project that you are trying to match, you can choose those settings here in MPEG Streamclip. However, the options described above should work for most situations.

We recommend leaving all other settings as they are, and clicking ‘Make Movie’ when you are ready.

Choose a name and location for your converted file and click ‘Save’.

That’s it!