Coffee Break Film School Instructor Guide

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12 min
8 min
4 min

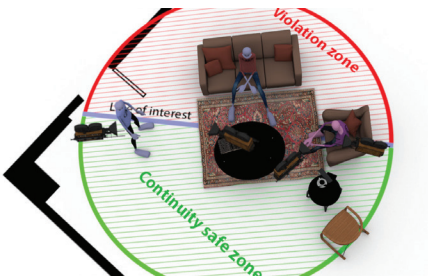
Introduction

The digital filmmaking revolution has been both a blessing and a curse. A blessing because it has put the tools to create cinematic visuals into the hands of just about anyone who desires to create them. A curse for exactly the same reasons.

When desktop publishing hit in the 1980's, the means to layout and print graphics and text in a variety of fonts became available to the masses. Yet the masses weren't magically imbued with an innate understanding of glyphs, ligature, kerning, page weighting or any fundamental design sense. The result was a gaudy and garish nightmare of corporate communications and county fair announcements that will hopefully be recycled long before future anthropologists unearth them as representative of the art form of that era.

We face exactly the same problem with digital filmmaking. The tools for making beautiful moving pictures are ubiquitous, but a solid understanding of the rules of the craft is not. And often film studies programs focus more on the history and personalities of the business than the actual practical process of disciplines like framing and and lighting.

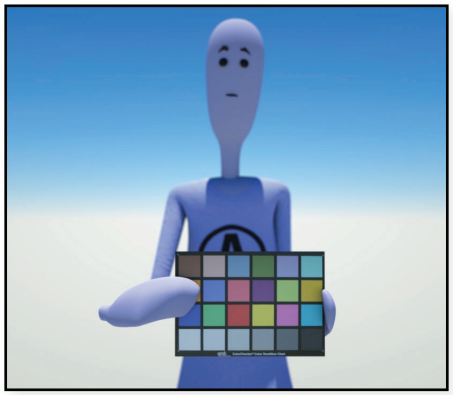
moviola.com's Coffee Break Film School (CBFS) aims to address the imbalance. We've brought together the key elements of each area of filmmaking–scriptwriting, lighting, cinematography, editing, effects, sound etc.–in short, concise videos. The collection can stand on its own as a primer for self-study, but works even better augmented by a larger assistive curriculum (which is essentially the purpose of this guide).



The CBFS Philosophy

What it is

Despite the cute title, Coffee Break Film School isn't intended as a direct replacement for a four year degree in film studies. The key philosophy in its construction is this: "Competence quickly." Each course is designed to bring a student from a place of limited understanding in a given subject to a level of comprehension that would be considered a "commercially viable" aesthetic, understanding the steps that if executed correctly would produce an acceptable production standard for commercial film and television work.



What it's not

In the endeavor towards brevity it's important to take note of what is not covered. In the core material we spend little time delving into the history of techniques, their innovators, or the various schools of filmmaking style, except in such cases where those relate to a specific technique.

Having said that, beyond the core material we include interviews and in-depth training that augment and expand what's covered in the fundamental videos.

Conspicuously absent from the core material is a focus on any particular software

package or camera. We've kept techniques as agnostic as possible so that they can be applied whether shooting with an Arri Alexa or a pocket camera, and editing with Apple iMovie or Avid Media Composer. Given the ubiquity of Adobe Creative Cloud, techniques are often demonstrated in that suite of software, but in such a way that the principles can be easily applied to other tools.

To ensure that students can directly apply what they've learned, we offer our "Survival Guides" to get students up to speed on a specific software package in 30 minutes or less of video training.

Overall, this lean focus offers educators a great opportunity to build a larger curriculum around the content and add emphases on history and theme as suits the participating students.

The All-Round Filmmaker

Filmmaking is possibly the most collaborative art form there is. Regardless of talent, it's nigh impossible for one individual to perform every task required to shoot, edit, finish, and deliver a film. Nonetheless, it's essential for a good filmmaker to have a firm understanding of what's involved in each part of the process.

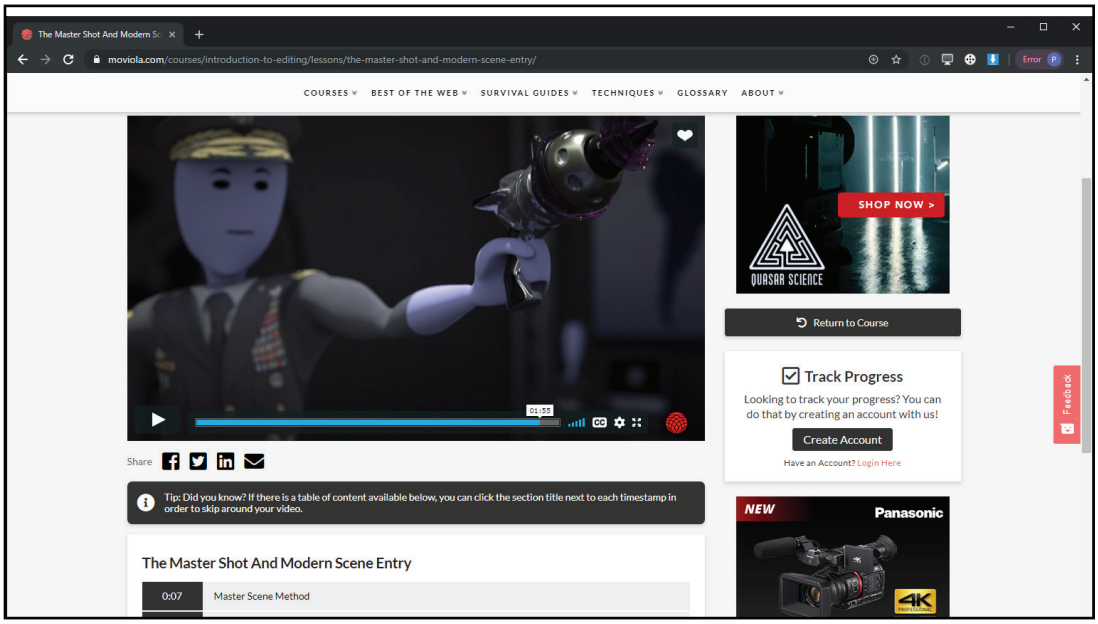
To that end, CBFS covers the essentials of each major discipline of filmmaking. By the end of the course, a student should have understanding of how to construct a compelling screenplay, how to light a set and wire it for sound, how to compose a shot, how to edit with continuity, how to color-correct the material, and even how to pull off some slick VFX.

Whether a student will choose to exercise one or several of these disciplines is up to them. But they'll at least have an appreciation for what's involved in each process and how to make sure other links in the chain are providing what's needed for the whole project to succeed.

Student assessment and the LMS

moviola.com provides a complete LMS to allow teachers to register and track students. Assessment comes in the form of per-section multiple choice quizzes and video view completion. Teachers can view student results and videos watched and use this as a basis for homework grading.

For more information on the LMS and a short video explaining how to set it up, visit: moviola.com/teachers

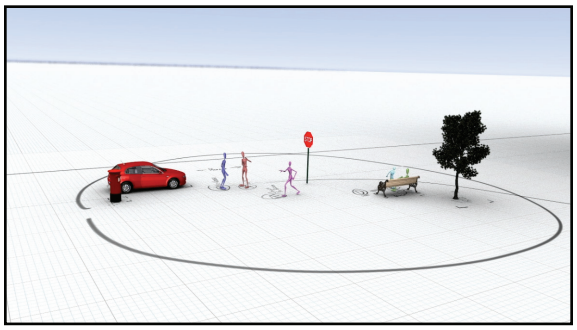


What this guide is for

This guide will outline what's covered in each Unit of the Coffee Break Film School, explaining what students will be learning in each section. In addition it will outline an expanded curriculum covering filmmaking in a greater depth, complete with class exercises. Instructors can adopt as much or as little of the additional material as suits their class format.

BACK OF THE BOOK–Some of the exercises include a "Back of the book" section which aims to provide instructors with some prepared answers if the topic is an area of filmmaking they are not particularly well-versed in.

With a virtual universe of video-based training on the web, it would be a waste of time to recreate quality training if it already exists. To that end CBFS occasionally aggregates third party content to augment core material. At the same time moviola.com is constantly updating its own content. As a result, it's possible that the online course structure may occasionally vary from what's presented in this guide.



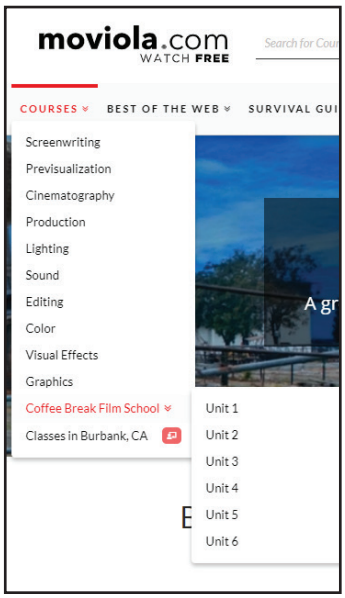
Two ways to teach

Coffee Break Film School is broken down into six units. To offer the greatest flexibility in terms of course structure we've created two separate breakdowns: "Big Picture," and "Project-Based." The difference is not so much in content as it is order

of delivery.

The Big Picture Course

This is the default course structure found through the standard site navigation bar at the left of the page (Courses > CBFS). In the Big Picture format each unit includes a core subject from one of seven disciplines of filmmaking: screenwriting, production essentials, cinematography, lighting, sound, editing and color, and visual effects.

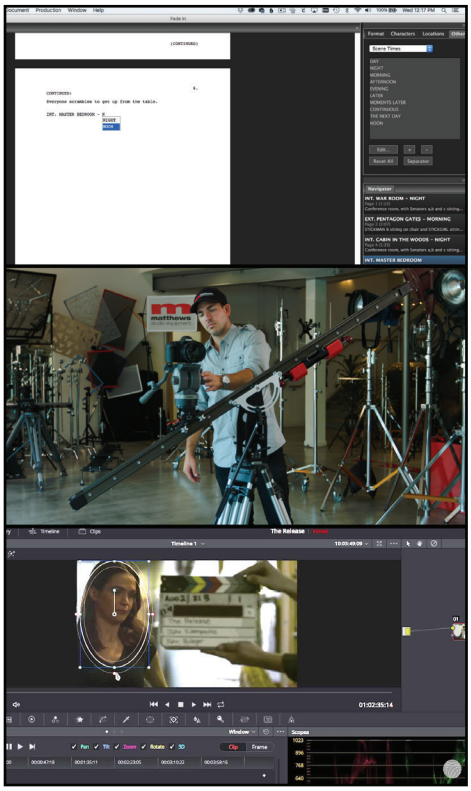


Project-Based Course

If you plan to take students right through the process of creating a film–from conception to story board to script to production to post–then our alternate project-based course is the one you want. Here we focus on a different subject at each milestone of the process. So the course starts out with a unit exclusively on storytelling and scriptwriting, moves on to production techniques and so on right through to post.

To access the CBFS content in this way, simply go to the Courses section in the site's main navigation. Here each subject is broken out separately, and the videos are sequentially ordered top down. You'll still need to visit the individual CBFS Unit pages to access "Going Further" and interviews .

This is a great way to schedule a class that has a finished film as its stated goal. The segmented learning actually forces the students to keep their projects on track. For example, once the course moves on from scriptwriting to production, students will need to put their scripts to bed and start preparing for the shoot.



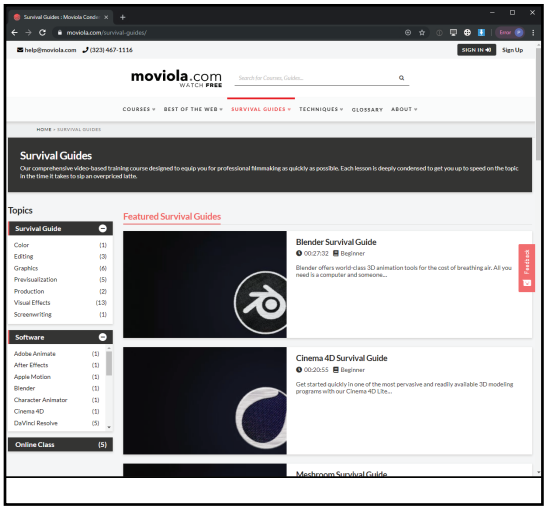
The downside of this teaching method is the loss of learning by repetition. By the end of a multi-week course, much of what was covered in scriptwriting may have been forgotten. Having said that, the modular nature of the core videos make them easy to review for a refresher. Additionally, the benefit of actually completing a project during the course is hard to overstate.

The most critical point in a project-based approach is to keep the projects manageable. Lock the runtime of each student's project down to under 3 minutes (unless you have the luxury of an entire year for the course). Also, encourage students' creativity but try to temper their aspirations for elaborate effects or extreme camera moves. A well-produced minimalist piece will have a much greater long-term impact than a poorly-executed sci-fi extravaganza.

If you want to have students collaborate together on projects, be very careful with how those teams are chosen. Often the most creative students will be the most hesitant to volunteer, but they will be the quickest to lose interest if they feel like they've been roped into working on an inferior plot concept. You may want to identify which students are most attracted to story and which prefer the practical aspects of shooting and composing images before dividing into teams.

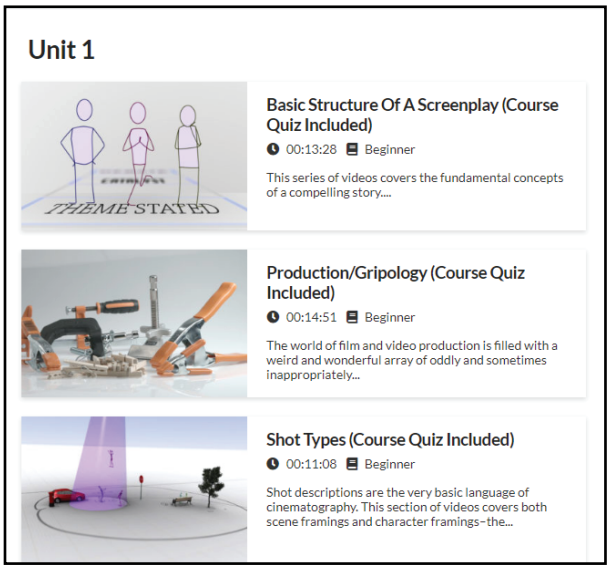
Understanding the CBFS Unit categories

In addition to the core section, this guide lists Survival Guides that may be relevant to the material covered. A full list of survival guides is available from the site's main navigation menu. For more information on survival guides, see the Reference Material section below.



A third section called Going Deeper leverages moviola.com's unique library of interviews with industry professionals, video lectures expanding on the core topic information, and coverage of the commercial aspects of the process (selling your film, marketing, distribution, budgeting).

A final section, Around the Web, offers videos from external sources that–while not produced by Moviola.com–have been reviewed and vetted and we consider to be valuable additional resources relevant to the current unit's subject matter.



IMPORTANT NOTE: While we've made efforts to ensure that moviola.com produced content is PG in nature, some of the linked content in the Around the Web section is not. It's imperative that you preview material in

the Around the Web section before playing to a class in order to ensure that the content is suitable to your audience and their age group.

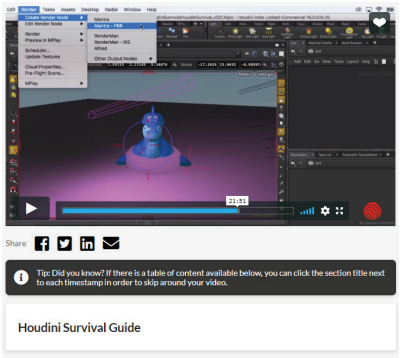
Reference material

There are several references that will prove useful as you teach the course.

Visual Glossary of Terms

Moviola's visual glossary of terms is a video-based library explaining the various terms in filmmaking, as well as key roles on a film set. Like the CBFS core content, these are concise videos–often just a few seconds long–that explain in an extremely intuitive manner the esoteric jargon that proliferates the industry.

Survival Guides

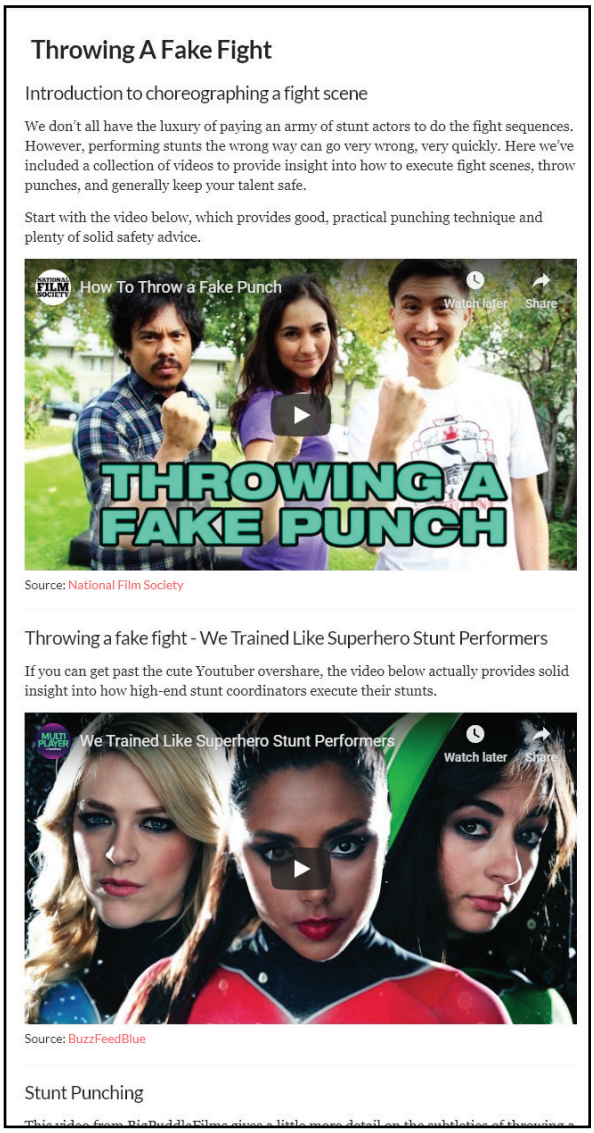


Survival guides are quick, thirty minute or less product-specific guides aimed at getting new users up and running with a specific software application or piece of hardware. The idea is that it provides enough of a working knowledge of the subject to get going. It's obviously not an exhaustive coverage, but it should provide enough familiarity that a viewer

can quickly build a knowledge of advanced features from an official product user guide as needed.

Best of the Web

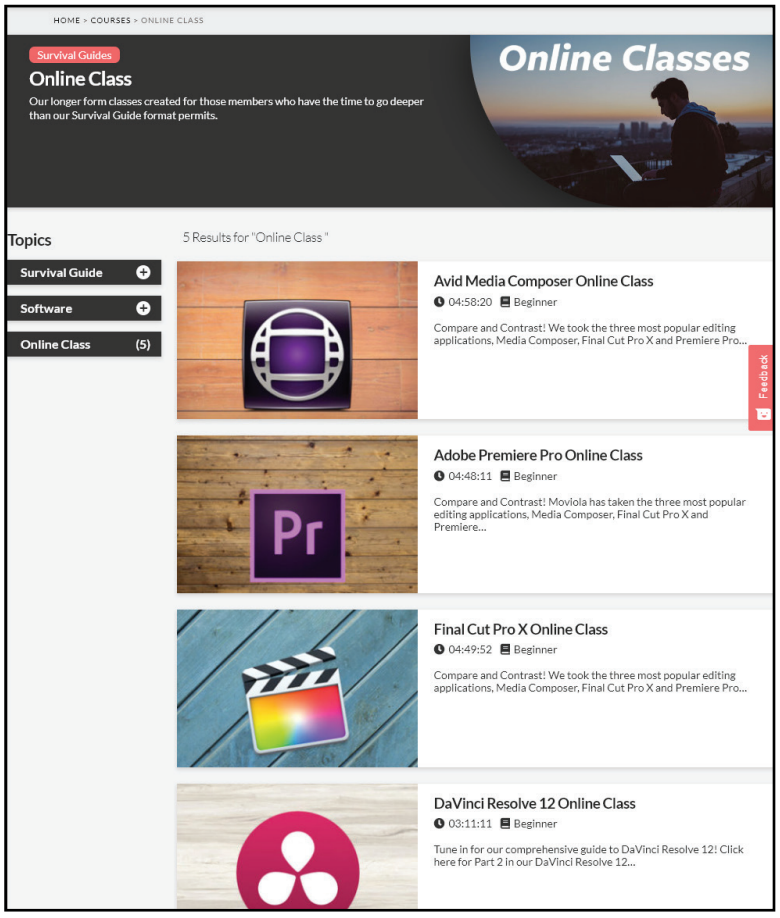
The Best of the Web section is an ever-growing curated collection of specific technique videos, arranged into master articles. For example, the article "Throwing a Fake Fight," comprises several different videos on throwing punches and choreographing fight scenes. This is a mix of original Moviola content and content from the web that our staff has vetted for accuracy. Check back often as we plan to expand this until it becomes a go-to destination for just about any technique you hope to employ in creating visual media.

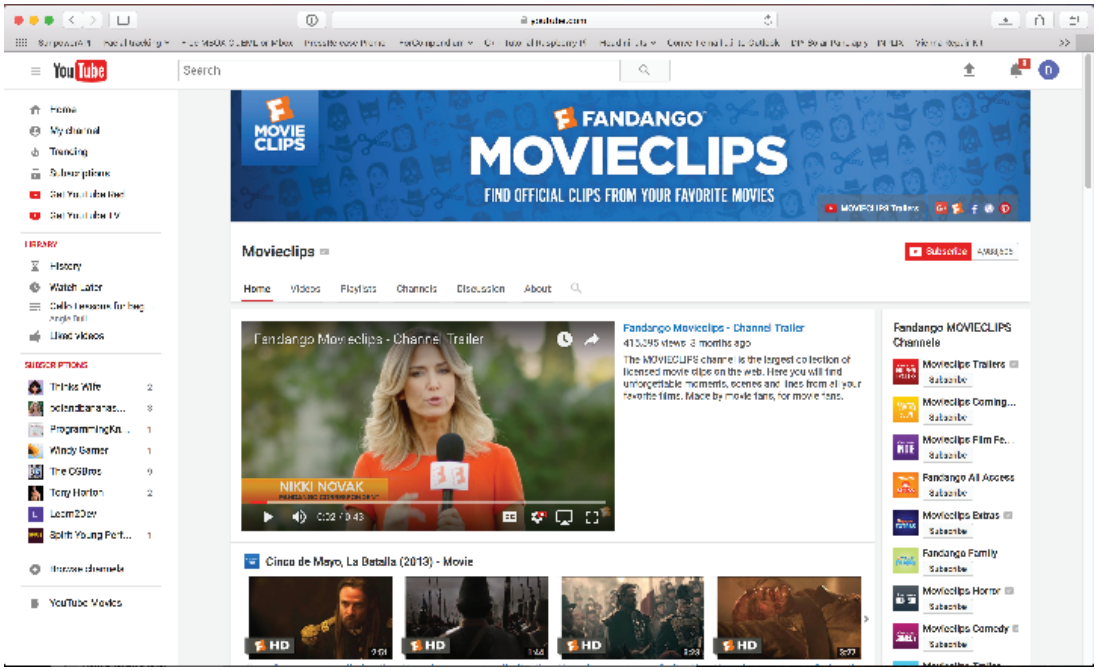


Classes

In addition to CBFS, moviola.com includes longer-form classes developed in partnership with our brick-and-mortar training facility in the Hollywood/Burbank area.

Coming soon, we'll be rolling out live, remote classrooms to teach specific software applications in depth, complete with interactive feedback with instructors (including screenshare of participant computers when necessary) regardless of where you are in the world. This will be a great way to expand your teaching skills, learning from Hollywood professionals without the airfare or the jet lag.





Video resources

For evaluation of major feature film moments, you can't go wrong with https://www.youtube.com/user/movieclips, Fandango's collection of license-cleared videos ready for critiquing and evaluating cinematic moments.

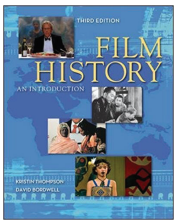
For working through editorial decisions and general post-production exercises, editstock.com provides an amazing catalog of licensable content, complete with dailies that need audio sweetening, color correction, and alternate cuts for a given edit.

Suggested textbooks

Textbooks suggestions below are broken down based on complexity. For each discipline we've tried to suggest a basic text for short duration courses and an additional (or sometimes potentially alternate) text for in-depth courses.

You'll notice that we have a single recommended text for film history. As mentioned earlier, CBFS is almost devoid of historical references, since historical context is one of those things that turns a 15 minute video into a 90 minute slide show. Nonetheless, a complete film studies curriculum should include a solid examination of film history. The recommended text is expensive as its current 3rd edition, but the affordable-as-used 1st edition is still a solid offering (if you can live without the seven years of history between the first and third editions).

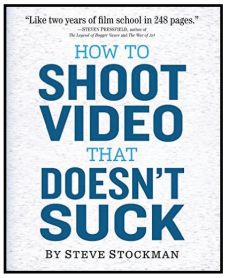
As an additional resource, check out the amazing series by CrashCourse on film history (https://moviola.com/best-of-the-web/film-history).



History of Filmmaking

Film History: An Introduction - Kristin Thompson and David Bordwell

This book is not cheap, but it's a solid, comprehensive overview of cinema history. You can make this required reading for students if they can afford the entry fee (you can pick up used copies for under $US40, the previous edition for even less) or use it to prepare class presentations.



Producing Film and Video

Base text: How to Shoot Video That Doesn't Suck - Steve Stockman

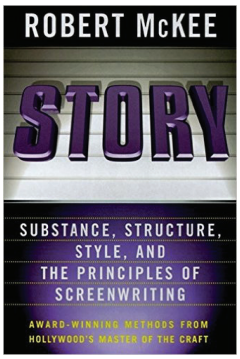
Very much in the vein of Coffee Break Film School, Steve Stockman's book focuses on the fastest methods for improving videos. To that end, many of his points gloss over details like light temperature matching or audio technique. And that's intentional: the point of the book is to open readers' minds to thinking about what, how, and why they're shooting. So while this may not be a great technique reference, it's useful for awakening students to the idea of production value.

Scriptwriting

Base text: Save the Cat - Blake Snyder

This is a modern classic. It does for scriptwriting what Steve Stockman's book does for the general production process. It has proven so popular that many Hollywood script reviewers use Snyder's concepts as a basis for determining whether to review a script or not.

Those of us who have worked in Hollywood for a while often have friends and acquaintances ask us to get their script "in front of studio eyes." But after being handed a copy of Save the Cat they inevitably withdraw the request in order to make a few "tweaks" to their story. It's months later–if at all–that they resurface with a script they're willing to submit. Such is the power of the practical wisdom Blake Snyder has poured into this book.



Deeper: Story - Robert McKee

McKee's Story is one of those books that on first read might seem

like contrived intellectual banter, until you realize that the author has thought deeply about his subject and chosen his words with great care.

Where Snyder's book is the no-nonsense, fast food approach to screenwriting, Story is a much more in-depth, philosophical examination of the art. That's not to say it's not practical: McKee goes into great detail about the writing process and solutions to common script problems.

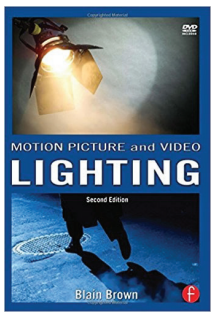
Both McKee and Snyder are quite complementary reads; Snyder actually gives a strong nod to the groundwork laid by McKee.

Our recommendation? For an introductory class, Save the Cat will offer the most impact in a limited amount of time. For a more advanced class, or for students inclined most toward the scriptwriting part of the filmmaking process, Story is a vital read. Our CBFS scriptwriting series is a summary of both books and including both as required texts is the ideal scenario.

Lighting

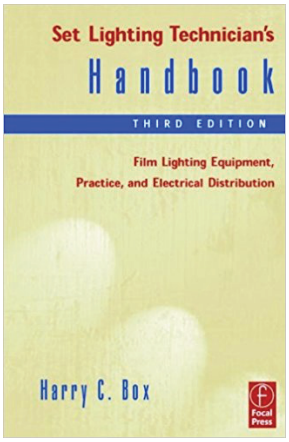
Base text: Motion Picture and Video Lighting - Blain Brown

There are several books out there on lighting, but few that are particularly helpful. This may be because good set lighting is a result of the combined skills of the cinematographer and the grip. Too many titles are written by one or the other.



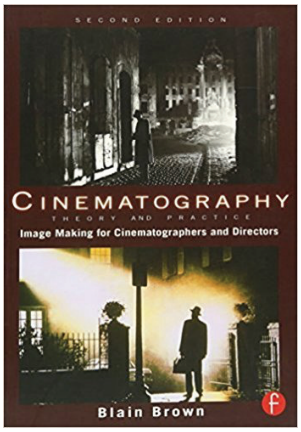
Brown's book offers a good balanced coverage of the technology and principles of lighting. It has a little more coverage of traditional film lighting techniques than may be necessary (the current edition was published in 2007, right in the thick of the transition to digital), but that actually works out well, since an historical context for a lot of lighting calibration and nomenclature is crucial.

There isn't a great deal of coverage of LED technology in the book, since that's something of a nascent science right now. Fear not: moviola.com's Techniques section has several recent lectures by innovators in the LED lighting scene and we're constantly adding new lectures on the subject as the technology evolves.



Deeper: Set Lighting Technician's Handbook - Harry Box

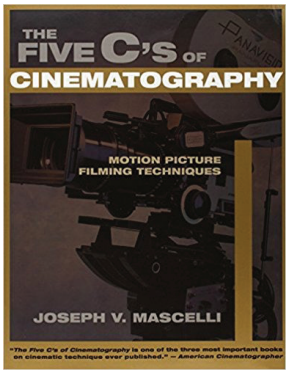
Don't be fooled by the technical "schematic" look of this book. It's true, this is a technician's handbook, but there's a great deal of wisdom with respect to lighting setup and application. The specifics of different lighting setups and the stated goals are clearly laid out with diagrams. The electrical section is extensive and explained in a very understandable style (i.e. for film students rather than electrical engineers).



Cinematography

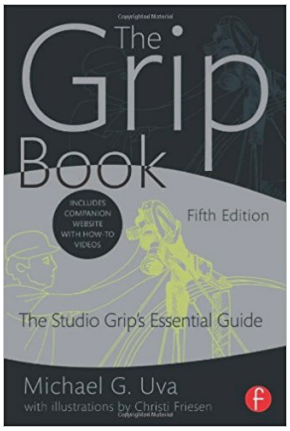
Base text: Cinematography: Theory and Practice - Blain Brown

Another book by Blain Brown, this provides a solid introduction to depth, lensing, continuity, and lighting. There's also a little historical context to some of the techniques as well as a fair amount of technical details surrounding cameras, lenses, and lights.

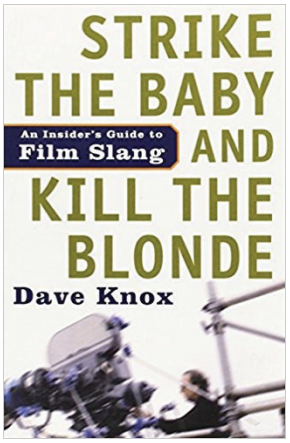


Deeper: The Five C's of Cinematography - Joseph Mascelli

A classic (originally published in the 60's), this book explores



many of the fundamentals of cinematography with clear diagrams of the techniques outlined. While cinema has significantly progressed since the 60's, the techniques in this book are still a valuable groundwork for modern filmmaking. Obviously used copies of this text are going to be sufficient for the course.



Production

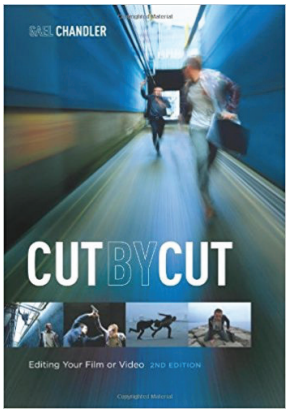
Base text: The Grip Book: The Studio Grip's Essential Guide - Michael Uva

Highly technical, this book gives a solid overview of all the tools available for grip work on modern film sets.

Deeper: Strike the Baby and Kill the Blonde: An Insider's Guide to Film Slang - Dave Knox

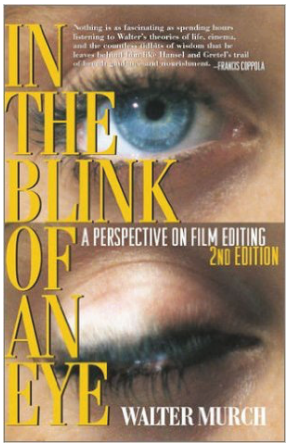
A great exploration of the endless insider terms of the film industry.

Editing



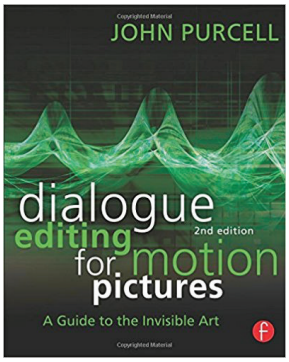
Base text: Cut by Cut: Editing Your Film or Video - Gael Chandler

This book covers the important factors of editing in a very no-nonsense way.



Deeper: In the Blink of an Eye - Walter Murch

This book will certainly get students thinking, as one of the most significant editors of the twentieth century introspectively examines the editing process. Definitely worth the read for any students who become passionate about editing.

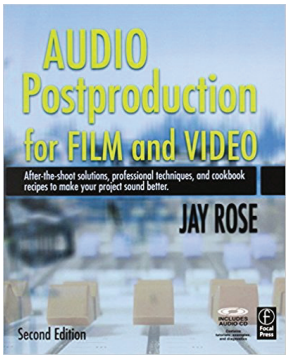


Sound

Base text: Dialogue Editing for Motion Pictures - John Purcell

With dialogue being the core element in a movie's soundtrack, this text gives a thorough explanation of how to work with dialogue on its own and in the context of the mix.

Deeper: Audio Postproduction for Film and Video- Jay Rose



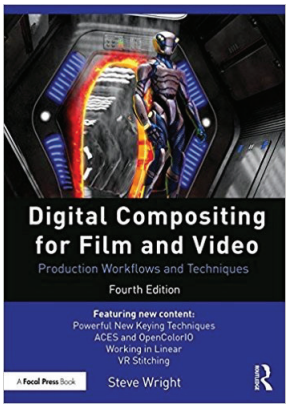
This is one case where we definitely recommend purchasing both texts, since Jay Rose' book adds so much additional insight to the subject.

Visual Effects

Base text: The Art and Science of Digital Compositing - Ron Brinkmann

Often called the "bible" of visual effects compositing, Ron Brinkmann's clear explanations of the principles behind compositing make for essential reading. Visual effects work is about problem solving and understanding how the computer operates on pixels is the most important step to understanding what a given shot needs to make it work. The second edition is an excellent update, although the first edition is extremely affordable (typically $US5 in the USA including shipping for a used copy).

Deeper: Digital Compositing for Film and Video - Steve Wright



Perhaps a little less breezy than Brinkmann's work, Steve Wright nonetheless covers a massive amount of practical material, providing both theory and application on a broad swathe of essential topics.

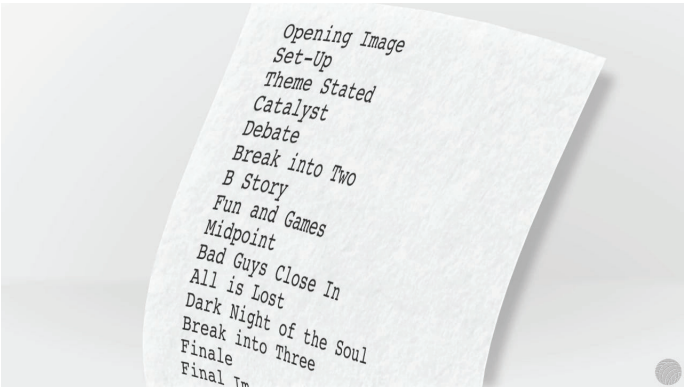
Expanded Curriculum: Big Picture Course

Unit One

Core

Screenwriting: Basic structure of a screenplay RT:~15min

This series of videos covers the core concepts of a compelling story. It's critical that students understand the importance of adhering to fundamental story structure. Students are often resistant to applying a "formulaic" structure to their pre-existing story ideas. The videos actually address this point, with the comparison to the verse/chorus structure of just about every pop song ever written.



The exercise below will help reinforce the point by identifying the beats in existing films. If you have particularly vocal and passionate opponents of the idea of structural adherence, you may want to perform the

exercise with one of their favorite films to see if it aligns with basic story structure.

Exercise: Fill out a BS2 (Blake Snyder Beat Sheet) for two different movies. This works best as a homework assignment. As a class, students can then discuss their choices for the various elements of the BS2. A final BS2 drawn from the consensus of the class can be compiled and kept as a reference.

Since story is so critical, consider weekly BS2 evaluation assignments for different films throughout the course. Look for films that are either airing that week on free-to-air or currently free as part of a subscription service like Netflix to reduce the financial impact on students. You can choose from the list at savethecat.com (see "Back of the book" below) in order to have an existing reference beat sheet.

Back of the book: http://www.savethecat.com/beat-sheets-alpha contains a list of beat sheets created for popular movies. These, of course, are someone else's opinion, but they'll make for a good benchmark against which to compare students' evaluations.

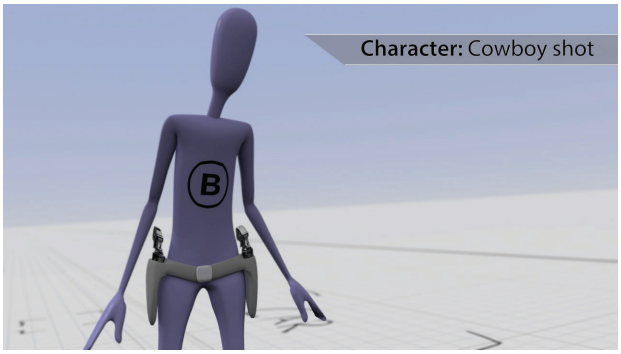
Production: Gripology

RT:~15min

The world of film and video production is filled with a weird and wonderful array of oddly and sometimes inappropriately named pieces of support gear. Understanding what's out there and how to use it is fundamental to perfecting basic on-set staging. This series of videos covers the most significant pieces of set gear, right down to milk crates and "furni" pads.

Exercise: As a classroom exercise, have students set up and strike a C-stand, adding a weighted light to the stand and sandbags to legs. Ensure observance of the right hand rule when positioning the C-stand.

Obviously your ability to demonstrate gear in class will be dependent on your actual inventory of grip gear. As much as you can, though, take this time in the course to familiarize the students with any grip equipment at their disposal for shooting their own content during the course.



Cinematography: Shot types

RT:~11min

Shot descriptions are the very basic language of cinematography.

This section of videos covers both scene framings and character framings–the terminology and the visuals.

Exercise: Find a scene that moves from establishing shots through to character shots. Have students identify each shot type. Part of the exercise is to build awareness of shot choice so that students can begin to deconstruct the films and TV shows they're watching to learn from other filmmakers.

Back of the book: For a nice summary, work through the examples found here: http://www.empireonline.com/movies/features/film-studies-101-camera-shots-styles/

Lighting: Introduction to lighting

RT:~12min

Before students learn light staging techniques like three point lighting, it's good to have a grounding in the fundamental aspects of light quality, terminology, temperature and source color. We'll be building on these fundamental concepts in future courses, so it's essential that students get a good grasp of them at this point.

Exercise: Have students identify light sources in the room, estimate the color temperature of the lighting, observe the color bounce from one surface to another, and note the softness of the penumbra of shadows in the room.

Sound: Operating a boom mic

RT:~8min

Capturing good sound on set is crucial; botch it and nothing short of ADR (Automated Dialog Replacement) will remedy the situation. To that end, we've put boom operation right here in Unit 1. Once students have viewed this set of videos they'll have an understanding of how to capture competent set audio.

Note: if you lack a boom mic as part of your course production equipment and are relying on lavallière mics for all your audio, substitute the lavallière videos in Unit 2 here. You can then cover booms in Unit 2 so that their operation is still included in the course, but get right to the more relevant information on lav mics here in Unit 1.

Exercise: Have students try holding a boom mic using different stances. Let them hold for 2-3 minutes at a time to get a sense of the fatigue produced by different holding positions.

Next, record one of the students with the boom held at different positions with different aims. You may want the "presenter" student to say the position and aim of each boom placement, so that when you listen back you'll have a direct reference for each recorded phrase. Listen back to the audio with some reasonable monitor speakers and observe with the class the different qualities of the sound for each recording.

Back of the book: Use the Moviola "AsAnActor.mov" clip to review boom sounds if you lack access to a boom in the classroom. Despite the animation, this is actually a real boom recording, as you'll see when the boom occasionally enters frame. You'll hear the various sounds produced by the boom as it moves towards and away from the actor and swings off-axis. Also note that from 30s-40s into the video you're actually hearing a chest-worn lavaliere signal as a comparison to the tone of the boom.

Editorial and Color: Introduction to Editing RT:~14min

There are many courses on how to perform edits using different non-linear editing software packages, but here we focus in on the aesthetics of editing. How edits inform subtext, the emotional significance of different editing techniques and the role of suspense and surprise are all covered.

This course complements the discussion of subtext in the scriptwriting structure series of videos.

Exercise: Using editstock.com *Pool Party* or *Bingo Night Heist* footage (or some other source of raw dailies media) have students attempt to edit two different versions of the same short film. In the case of *Bingo Night Heist,* one should emphasize drama, the other comedy. See if they can alter the subtext conveyed by the same lines of dialog by making alternate editing choices. For *Pool Party* students can attempt to cut one version that emphasizes bravery, another that emphasizes shyness.

VFX: Shooting visual effects RT:~22min

Perhaps the most important visual effects technique students can learn is how to shoot footage in a way that's VFX friendly. Having the correct source footage can literally save hundreds of thousands of dollars in postproduction on a large feature.

This set of videos outlines color preparation and set survey techniques, specifically geared towards 3D camera tracking in post-production.

Note: a later course, "Adding CG elements to a scene," goes into additional detail with respect to shooting in anticipation of adding rendered CG elements to the shot. You may want to include the "Principle Photography" portion of that video series as an additional component here.

Exercise: Following the basic steps in the last videos, you can film a simple moving camera video shot (even with a smartphone) of say, the landscape outside the classroom, or even the classroom itself. Then import into After Effects and perform a camera track. Don't worry too much about removing lens distortion or rolling shutter. If you keep the move relatively smooth and slow a basic track should be readily achievable. Keep the clip length short. Create a floating text effect for a quick "wow-factor" with the class.

Note: watch the supplemental video, "Adding CG to your Next Movie" for a quick overview of the process ahead of the class.

Signature interview

Writing and directing, with Marcus Dunstan.

Going deeper

Cinematic Documentary Storytelling - Scr, Essential Tools for Lighting - Prd, Getting

Cinematic Images in Imperfect Locations - Cam, How to Capture Good Audio in the Field - Snd, Signal in the Noise?-EDT, Storyboarding you next video - Scr

Survival Guides

Resolve for DI, Final Cut Pro X, Fade In

Complementary reading

Save the Cat - Chapter 4. Ideally, students should read chapters 1-3 as well, but this chapter hits on Snyder's core concept of the "Blake Snyder Beat Sheet," or BS2 for short.

Cinematography: Theory and practice - Filmspace (pp.1-28). Covers shot types and the master scene method.

Motion Picture and Video Lighting - Fundamentals of Lighting (pp. 35-57). Covers the qualities of lighting and the emotional context connoted by various lighting "looks."

Cut by Cut: Editing Your Film or Video - Stage II:Editing, Part I (Ch.5-7) A great summary of the thought process behind editing. The sections "Five reasons to cut" and "Five reasons not to cut" are great for getting students thinking about what they're doing in the editorial process (although the second section should probably be called, "Five reasons not to use a cut," as you'll see when you read it).

How to Shoot Video that Doesn't Suck - Introduction and Part 1. This section is designed to get students thinking about what really matters in filmmaking and disabuse them of the notion that pointing a camera and pressing record is going to be enough to create something that other people will actually want to watch.

The Grip Book - Chapters 2 and 3–Essential Equipment and Expendables–are a

summary of a vast amount of grip gear, some of which is covered in this unit's video. Since these chapters are alphabetical lists of grip gear and expendables a thorough reading isn't necessary. Students can skim through both chapters to get a basic acquaintance with the various pieces of equipment, what they look like, and what they're used for.

Dialogue Editing for Motion Pictures - Chapters 4-6. This section provides a solid overview of sound for film, including a brief description of on-location recording.

Around the web

Kurt Vonnegut:Shapes of stories - https://youtu.be/oP3c1h8v2ZQ - RT:~5min

(Kurt Vonnegut in depth version - https://youtu.be/4_RUgnC1lm8?t=7m45s, RT:~47min)

Elements of a Great Film - https://www.youtube.com/watch?v=7AFTM5pBOwE - RT:~5min, tag is screenwriting

A mini structure within the larger structure - https://vimeo.com/195536673 - RT:~2min

ROCKETJUMP: How to write a logline - https://www.youtube.com/watch?v=r0Fj_H9Q73k - RT:~15min

10 Best structured movies of all time - https://youtu.be/mgk6e8gWDbk, RT:~16min, Screenwriting

Unit Two

Core

Screenwriting: Creating believable characters RT:~7min

On screen characters are a hyperbolic representation of real-world people. Creating compelling characters in a screenplay requires not only an understanding of their motivations, but also the roles they play in the story. Some characters require greater dimension, others can exist as the story equivalent of a cardboard cutout.

This set of videos examines the basic principles of developing characters. A follow up series in the next unit will look more specifically at the protagonist and antagonist.

Exercise: Have students identify someone in their circle of relationships whose life they consider to be interesting. They should then outline the screen version of that person, intensifying their character traits and the severity of their circumstances. Have them create a fictitious contradiction between the person's daily life and their character. Finally, they should determine how in their story the character of the person will overcome the characterization. As a bonus exercise, have the students add complexity to their person by adding some opposite personality traits, eg. a good father hiding an addiction to gambling.

Production: Slating RT:~11min

Possibly the most iconic item in filmmaking, the slate is a vital part of a professional

movie set. And yet the majority of people outside the professional film industry either don't use one or don't know how to make the most of it.

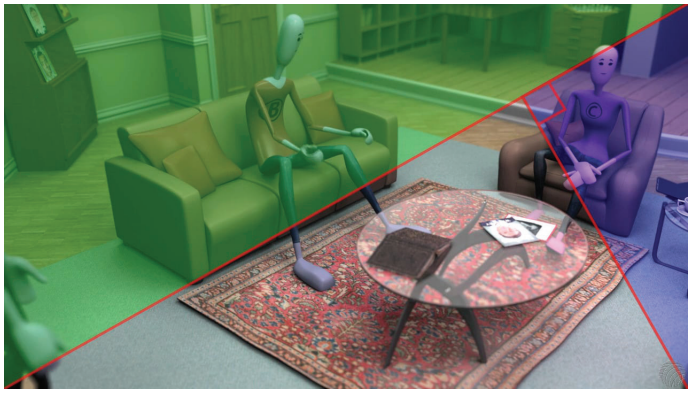
This series goes over the purpose of a slate, correct protocol for slating, the purpose and meaning of obscure symbols on the slate, and correct set etiquette.

Exercise: Since this is primarily informational, you can run the following spot quiz:

1. What does MOS signify for a take?
2. What are soft sticks?
3. What are second sticks? What are the two reasons for performing second sticks?
4. What is tail slating?

Cinematography: Framing RT:~15min

In this section we get to the heart of shot design, covering the fundamental principles of composition. We begin with the rule of thirds, then go deeper into the importance of dimensionality in staging a shot.



A good portion of the series is given to framing actors and providing the appropriate headroom for a shot. Finally, lens and aperture choice is explored, including the logic behind choosing a wide angle lens over a narrow lens for a given shot.

Exercise: If available, connect a camera with zoom lens (a DSLR will do) to an HDMI monitor so that the entire class can see. Using a small set of props (items from a doll house are ideal), adjust zoom, camera position and aperture to see the effects. If you have a fast lens available (like a 50mm prime with a 1.4 or 1.8 aperture) take a look at the bokeh effect of shooting something close up at wide aperture.

Experiment with different prop positioning to see the effect on dimensionality. Explore leading lines and continuing lines out beyond the frame.

Lighting: Three point lighting RT:~10min

The most significant lighting setup in both still photography and moving pictures is the three point lighting setup. Yet remarkably very few people know how to do it correctly. Here we carefully and scientifically drive home the standard positioning of all three light sources and explain the desired facial shadow direction and how to vary contrast. We also review the use of additional lighting to enhance the look of a shot.

Exercise: Try to recreate the basic three point lighting setup in class. You may be limited in height and unable to get a true 45° raise of the key light off the floor; in such cases, just get it as high as possible. As a second exercise on a sunny day, take some white foam core and experiment with using the foam core as a bounce source reflecting the sunlight (see the end of the overview video).

Sound: Lavalliere

RT:~5min

One of the shorter fundamentals, but extremely important nonetheless. This set of videos covers the process of correctly concealing a lavallière mic for optimal sound while using moleskin to hide its presence and reduce fabric noise.

Exercise: Try miking a subject using a moleskin in such a way that its presence (and the presence of cable or wireless pack) is hidden from camera.

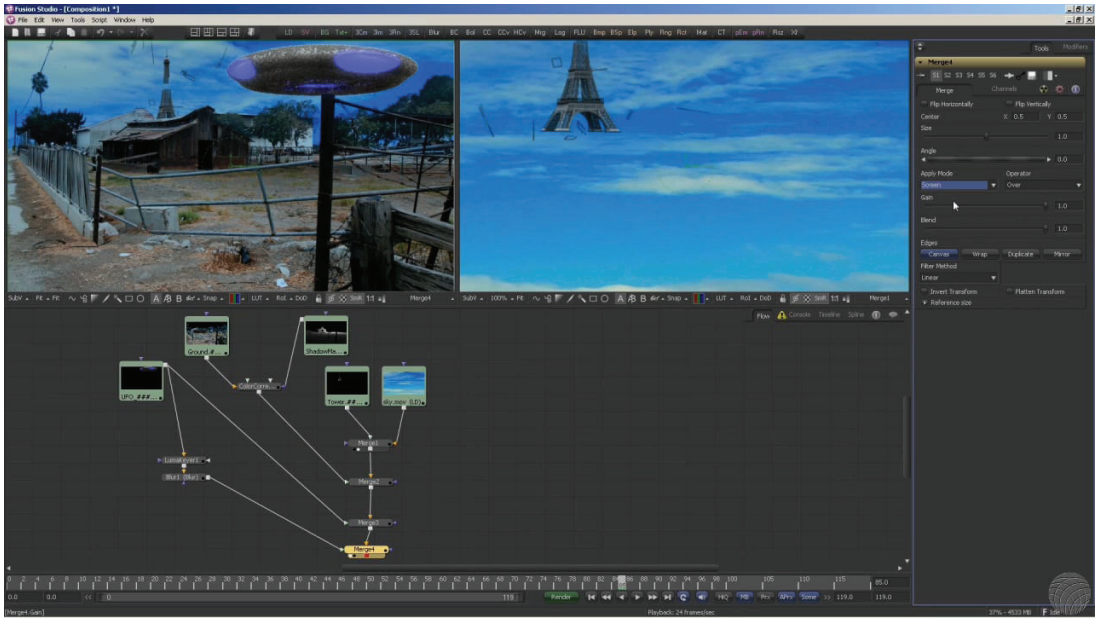
Editorial and Color: The mechanics of editing RT:~18min

Here we cover some of the fundamental techniques of editing, including rules of continuity, cuttable angles of difference, cutting into and out of moving shots, L-cuts, cutting for actor performance, and timing considerations.

Exercise: Assign students editstock.com *Gnarly in Pink* footage (or some other source of raw dailies media) and have them attempt to create a piece with: 1) at least three different angles along the same side of "the line", 2) a jump cut that has a legitimate motivation, and 3) a natural cut from a moving shot to a static shot or vice versa. Obviously it's essential that you choose footage that offers multiple angles (and at least one that would violate the 180 degree rule if used incorrectly).

VFX: Introduction to node-based compositing RT:~12min

Node-based compositing can be one of the most confusing aspects of digital



effects and yet more and more applications are using the node paradigm for significant portions of their functionality. In this gentle introduction we explain the fundamentals of nodes in a way which should help clear up the confusion for students.

Exercise: We recommend combining this video with the Fusion survival guide. Fusion is a *free* full-featured node-based visual effects tool and the survival guide should provide enough context for students to begin experimenting with nodes and the visual effects they can help create.

Signature interview

Producing independent films with Joel Soisson.

Survival Guides

Resolve for Editing, Fusion

Going deeper

Test Charts for Production - Prd, How to Light an Interview 1/2 - Lgt, Recording Great Audio In-Studio and On-Location - Snd, How to break into TV writing - Scr, Edit Out Loud - Edt, Fusion: The Indie Filmmaker's New Secret Weapon - VFX

Complementary reading:

Cinematography: Theory and practice - Visual language and Lens language (pp. 29-60). A look at the visual language of cinema, the use of depth, and the effects of lens choice.

Set Lighting Technician's Handbook - The process of creating natural lighting (pp. 146-156). While this is the "deeper" text and budget may not permit each student having a copy, consider providing these 11 pages as a hand-out for students. They are an excellent introduction to 3 point lighting, explaining the reasoning behind choice of light position and quality. There are also excellent photographs and diagrams illustrating the techniques.

Cut by Cut: Editing Your Film or Video - Stage II:Editing, Part I (Ch.8,9 and Appendices D,E, & F) This section goes over all the mechanical processes of editing, part of which is covered in the core editing video in this unit, while another part of this is covered in the editing application survival guides. It makes great reinforcement reading for both.

How to Shoot Video that Doesn't Suck - Part 2 & 3: Preproduction. This section covers the essentials of preparing a story before heading out to shoot it. This ties in well with a lot of the advice in the screenwriting segments for Unit 1 and 2. It provides an essential basis for the process of creating a shot list and previsualizing the shoot before actually firing up a camera and spending people's time and/or money.

The Grip Book - Chapter 1 - Introduction. This is a vital introduction to life on a film

set, with a basic coverage of fundamental procedures like call time, call sheets, and on-set etiquette.

Around the web

Public Domain 101, https://www.youtube.com/watch?v=Nc3Dnh2JCMI - RT:~2min, CLEAN, Screenwriting

Steven King on screenwriting, https://youtu.be/l8TkQvdJVbc?t=2m50s- RT:~53min, EXPLICIT, Screenwriting

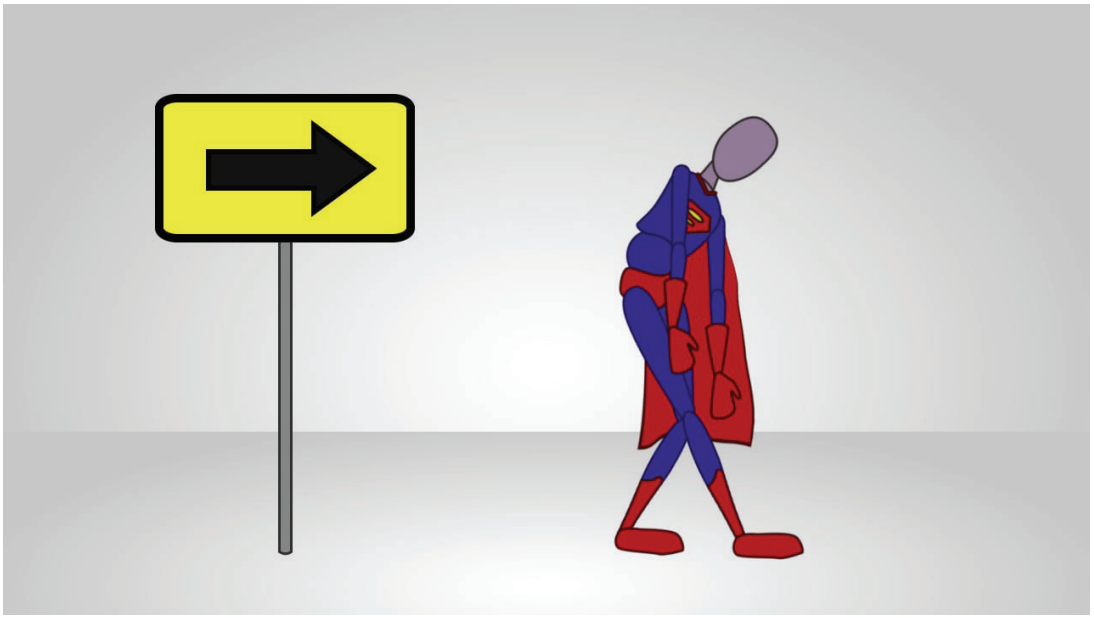
Top 15 mistakes beginner filmmakers make - https://youtu.be/t1myw_0W5E8, CLEAN, General filmmaking

Unit Three

Core

Screenwriting: Creating believable characters II
RT:~12min

In this section we hone in on the all-important protagonist of the story. We look at the protagonist's desire, will power, empathy, protagonist archetypes and the vital concept of character arc. (Characters must arc to create a satisfying sense of closure– if scriptwriters botch the arc the whole story falls apart.) We also look at designing a supporting cast around the protagonist and the importance of an antagonist to create contrast in the protagonist.



Exercise:

This section has the most exercise time of the screenwriting scripts to date. Consider splitting the exercises across multiple classes, or divide between in-class and homework assignments.

1. Students can take the character they created in the previous scriptwriting exercise (or start a new one if they're not happy with their initial choice) and incorporate the new information to sculpt a fully formed protagonist (key desire(s), identify the kind of hero, determine what arc would be appropriate in a story).

2. Students should now create an antagonist worthy of the protagonist, one that generates a significant contrast in the story.

3. As a final exercise, have students create 1-2 pages of dialogue between their protagonist and a complementary character (a spouse, a co-worker etc. but *not* the antagonist). Then–as a class exercise–choose a handful of scripts and read them to the class without identifying which character is saying what line. The idea is to decide whether the personalities are unique enough to pass the "limp and an eyepatch" test. You may want to skip past the first couple of intro lines of dialog which could otherwise "spell out" which character is which. Use the same voice to deliver both lines–avoid character voicing which would again allow students to keep track of the difference between characters. We want the focus to be on the dialog content differences.

Production: Electricity RT:~16min

Generating the amount of light required for creative studio lighting requires a lot of electricity. Electricity can have the unpleasant side-effect of killing or seriously injuring people. As such this course covers the essential information for working with electricity and calculating load balances to avoid tripping breakers during a shoot.

Exercise: If available, take students through the process of continuity testing a light in preparation for a shoot. Ideally, if your institution has a dedicated facilities manager handling electrical you could try to coordinate an in-class presentation or interview with them. This is especially helpful if trying to communicate local ordinance electrical requirements.

Cinematography: Coverage RT:~10min

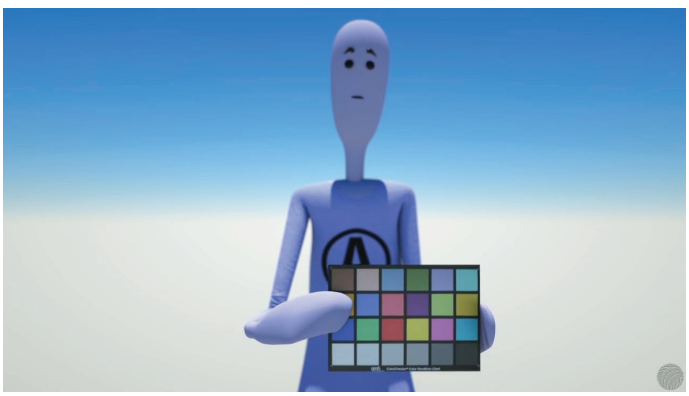
Here we move on to the process of capturing on set everything needed for the edit. This builds on both the "Shot types" and "Framing" videos. We look at the classic

master scene method of coverage and then discuss why it actually doesn't work for much of modern filmmaking. We look at the alternate concept of progressive reveal and discuss the all-important line-of interest in detail.

Exercise: As with framing in the previous unit, use set pieces from a doll set to experiment with various angles of coverage. Try taking 10 second clips of the different angles you choose and then have the students try their hand at editing them into a story in a Non-Linear Editing application. They can add their own dialog and music (in a Mystery Science Theater style–if you're unfamiliar with the concept, look here: http://mst3k.com/where-to-watch/) and attempt to create a satisfying edit from reveal to completion.

Lighting: Lighting control

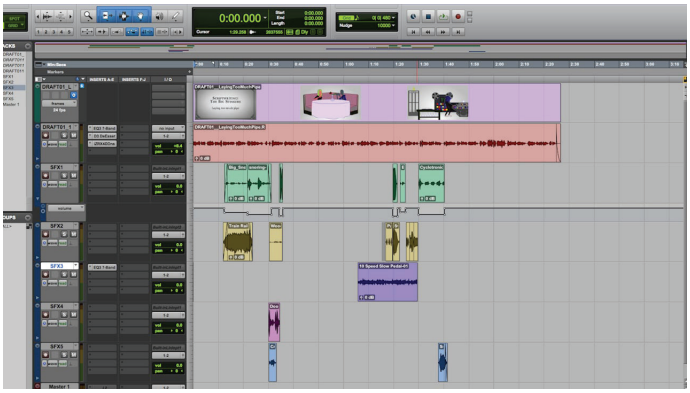
RT:~14min



Color control is an extremely important aspect of lighting. Understanding how scene color is affected by quality of light fixtures, mixed light sources, and

the use of scrims and dimmers will go a long way toward improving production values. Students will learn the difference between grabbing some work lights from a hardware store and using custom-designed production lighting. They'll also learn the importance of balancing light sources and dealing with conflicts between daylight and interior lighting.

Exercise: Find a few different portable lights sources: desk lamps, fluorescent lamps, LED lamps, work lights, and/or production lighting and film a human subject sitting at a desk with as many colored items on the desk as possible. Include a piece of white paper that can be used for white balancing in post. Capture with a camera set to a single white balance. Bring them into an NLE and compare the different shots. Then white balance each shot in the timeline using the piece of white paper and compare the result. Have students note the quality difference in overall color even when all shots are white balanced to the same white point.



Sound: Postproduction Sound Pt 1 (From 'Intro' to 'Fixing Flubs')

RT:~16min

In this set of videos we focus on creating a balanced soundtrack from the various sound sources in a film project - dialogue mics, ambience, foley, sound effects, and music. We look at fixing phasing issues, sorting and determining the best source mic for each performance, and repairing flubbed audio without having to resort to automated dialog replacement.

Exercise: If one or more of your students have already completed shooting a project, have the class organize and arrange the mic sources in your DAW (Digital Audio Workstation) of choice, using the checkerboarding system. If not, you can use the following footage from editstock.com: *Come and Get It* and *The Boxer* for sound effects, *Pin It* for dialog noise reduction, and you can review *Built By Life* for an example of good sound with simple sound effects.

Editorial and Color: Color correction fundamentals RT:~14min

Color correction used to be very specialized and something of a "dark art," but economic pressures in the industry have forced editors to take on the role of colorist, especially in the broadcast sector. As such it's more important than ever

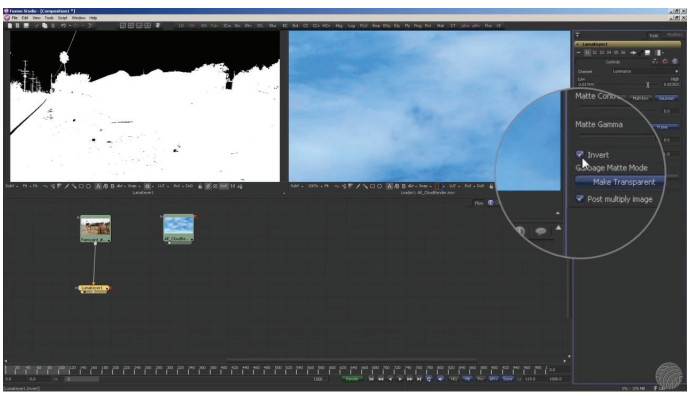
that filmmakers have a clear grasp of the science and art of color correction. In this first section of a two part series we look at the basic issues of viewer subjectivity, the way the brain compensates based on context and perceptual history, using scopes as an objective measure of color values, and the concept of clipping and crushing the black and white points of an image.

Exercise: This is a great opportunity to work through optical color illusions to help students understand just how *untrustworthy* their color perception is. (At time of writing, a good collection of illusions can be found at: http://www.archimedes-lab.org/color_optical_illusions.html)

VFX: Sky replacement RT:~14min

Sky replacement is a great introduction to visual effects shots. It's reasonably simple but still leverages 3d camera tracking, basic compositing, and color correction. Most student film cameras have a limited dynamic range and sky detail is invariably a casualty, so learning how to replace a blown out sky is both a practical tool and a great doorway into general visual effects workflow.

Exercise: The videos in this section are already very much geared to a step-by-step approach and so the best class exercise would be to reproduce those steps with student footage. If tracking in After Effects and compositing in Fusion (as described in the videos), just make sure you render the final animated sky in After Effects at the exact same pixel width and height as the source footage (the footage with the sky you're looking to replace). The editstock.com *J-Pops* footage is well suited for this exercise.



Signature interview:

The legal side for filmmakers, with Todd Burns.

Survival Guides

Resolve for Color Correction, Photoshop, After Effects

Going deeper:

Blocking Before Coffee - Cam, Choosing b/w Hard and Diffused Light - Lgt, The Video Editor's Guide to Audio Basics - Snd, Starting, Matching, and Styling your Color Grade - Edt, 5 Things: Audio Cleanup - Snd

Complementary reading:

Save the Cat - Chapter 3. Here is a concise summary of what it takes to build a strong protagonist.

Cinematography: Theory and practice - Cinematic continuity (pp.79-102). Here we explore the line of interest, along with general issues of continuity that will be explored more deeply in Unit 4's video series on cinematography.

Motion Picture and Video Lighting - Exposure Theory & Theory and Control of Color (pp. 99-148). An excellent–if a little lengthy–coverage of balancing lights and the theory behind exposure and light coloration.

How to Shoot Video that Doesn't Suck - Part 4: Production. This section covers some of the most important principles for coming away from a shoot day with something usable. It's a great reinforcement for much of what we've covered in the cinematography core videos up to this point.

Dialogue Editing for Motion Pictures - Chapters 10 & 11. These chapters provide a solid overview of organizing both the physical audio workspace (and good monitoring) and the digital one.

Cut by Cut: Editing Your Film or Video - Stage III: Completing your project, Part 2 (Ch.12, 13 and Appendix I) A good summary of the finishing, color, and DI process for a completed edit.

Around the web

Sympathetic doesn't have to mean likable - https://vimeo.com/97384324, RT:~7min, Screenwriting

The Dark Knight–Creating the ultimate antagonist - https://youtu.be/pFUKeD3FJm8, RT:~11min, Screenwriting

Who has the power? - https://vimeo.com/78314966, RT:~10min, Screenwriting, EXPLICIT

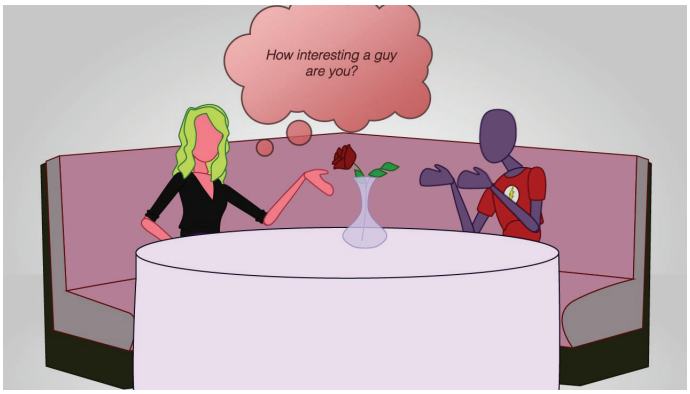
10 Best uses of color of all time - https://youtu.be/tILIeNjbH1E, Editing & Color, RT:~13min

Unit Four

Core

Screenwriting: All about dialogue RT:~11min

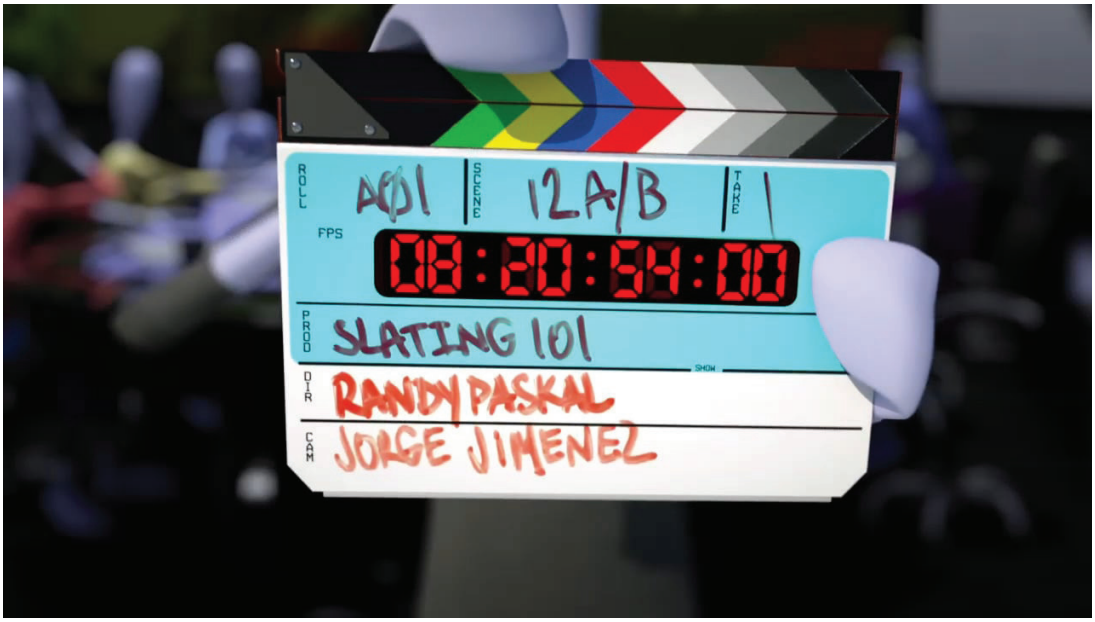
Many screenplays with great story concepts fall apart because of weak dialogue. Ideally every word of every line of dialogue in a screenplay should be carefully chosen for subtext and impact. In this set of videos we review the hyperrealism of screen dialogue, creating dialogue that aligns with a character's personality, compression in dialogue, the all-important topic of subtext rears its head yet again, and we discuss the power of drawing from emotional memory to create authentic and poignant exchanges. Finally, we visit the sticky subject of a necessary evil: exposition, and look at ways to make it a natural part of the storyline.



Exercise: have the class write a page of dialog between a detective and a (yet to be charged) serial killer in a police interrogation room. See if they can create dialog that sounds mundane but carries a menacing subtext.

Production: Timecode and logging RT:~10min

No way to sugar coat it: this is not going to be the most exciting class for students.

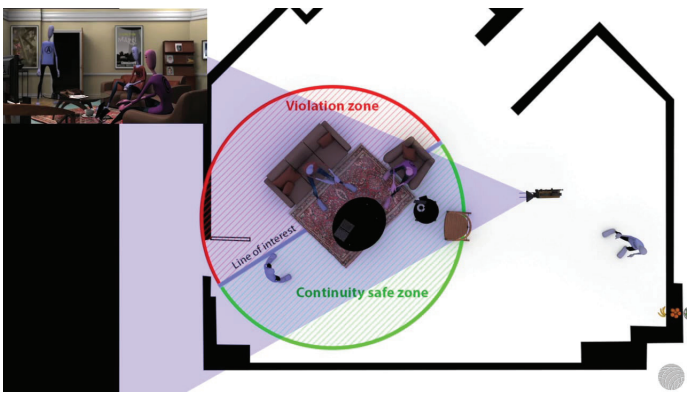


Nonetheless the subject matter is extremely important. Understanding timecode and alternate sync methods is vital in the modern world of mixed camera environments.

Exercise: Have all students with smartphones point their smartphones at the same location and start recording video on each. Use either a clapper or a hand clap to create a sound sync. Have someone perform an activity that everyone films. If you have a musician in the class (eg. acoustic guitarist) have them perform. Let students experiment with different framings, but don't let the recording go for more than about three minutes.

Import the video clips onto one computer (via email, Android transfer, or iOS Airdrop. If you're not familiar with these approaches, there's bound to be a geek in the class who can assist:)) and use the audio sync option in Resolve, Premiere Pro or Final Cut Pro X to sync all the sources as a single multicam clip using the initial clap. Now edit the multicam clip and see how successfully each camera angle was synced. (For a review of multicam and audio sync, watch the survival guide for the editing software you're using).

Given that this is the most common form of sync for student film projects, this is an ideal exercise to get them familiar with the process.



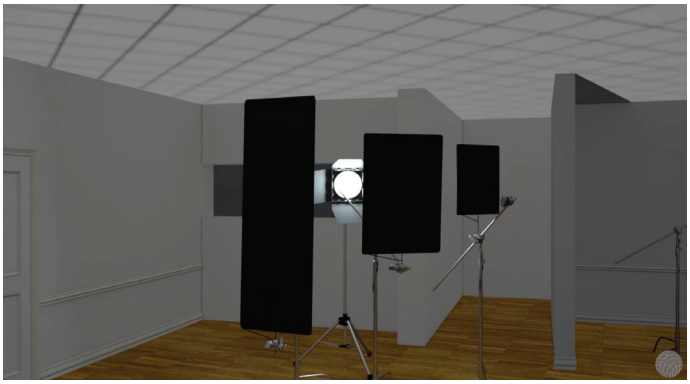
Cinematography: Continuity

RT:~10min

We've touched on the idea of the line of interest a couple

of times, but here we go into detail about what it actually means and solutions for crossing the line safely when the need arises. We then look at continuity of content, time, and motion in filmmaking.

Exercise: rent a fifties B-movie (or watch a public domain one online) and have students identify breaks in continuity between cuts and takes–especially a scene where people are eating or handling props. As an additional exercise, ask the students whether they feel they would have noticed those things if they weren't looking for them and at what point a good edit becomes more important than maintaining perfect continuity.



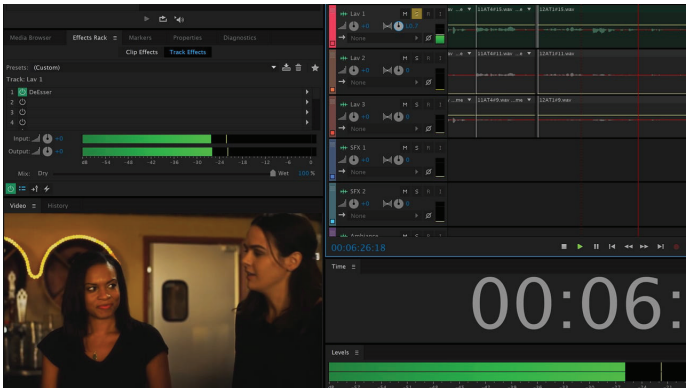
Lighting: Shaping light

RT:~11min

One of the greatest misconceptions about lighting is that adding more lights is the solution to fixing issues. In fact, cinematic lighting is as much about subtracting light as it is adding it. This series of videos introduces the various on-set tools for shaping light: barn doors, louvers, flags, nets, cookies and silks.

Exercise: Combine a single production light with a bounce card (could be cheap white foam core) and some flags (or black foam core if on a budget). (You may want to watch "One Light" with Barry Anderson in the Going Deeper section first.) Have students experiment to see how many different ways they can light a seated subject using just that one light and the light shaping reflector and flags.

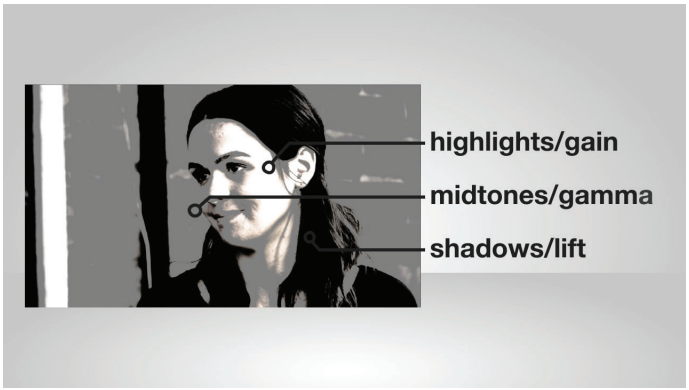
Sound: Post production sound Pt 2 (From 'Setting Levels' to 'Review')



RT:~16min

While sound engineers spend years perfecting the art of mixing, there are basic strategies for creating

a balanced mix between dialogue mics, sound effects and music. In this section we look at where to set the various levels, how to add an appropriate level of sound effects, foley and ambient sound effects, sound continuity, and adding music in a transparent way. We conclude with a quick discussion about the importance of a neutral monitoring environment.



Exercise: Continue with the set up mix from the previous unit's sound exercise and have students attempt to mix and pan levels correctly, then add foley, ambient sounds and music.

Editorial and Color: Color correction part II

RT:~22min

After delving a little deeper into color theory we take everything learned from this unit and the previous one and apply it to the process of principle color correction. We look at the three step approach of adjusting blacks, whites, and mids to create first a neutral grade, then a stylized one.

Exercise: We strongly recommend taking the students through the Resolve for Color Correction Survival Guide at this point. Once complete, have the students take two or three different shots from raw state, to neutral grade, to a stylized grade of their choosing. Make sure they use the parade scopes to identify and neutralize the black point and then white point. editstock.com's *Gnarly inPink* and *Anesthesia* are good choices for this. You'll need to make sure you use high-quality ProRes versions of the files for good results.

VFX: Tracking

RT:~26min

Tracking is at the core of most visual effects shots, be it 3D camera tracking, or perspective tracking. This series of videos looks at the

principles behind tracking, the various kinds of tracking (point tracking, planar tracking, 3D tracking), and the secrets to getting a good track even in "unfavorable conditions."

Exercise: This is a great opportunity for students to try their hand at matchmoving. Have students capture video of a billboard, the side of a bus, a smart phone or tablet, or some other rigid surface, then track the surface and apply their own personal graphic as a matchmoved element. As a bonus, see if they can use the principles learned in the color correction videos to match the color of the introduced element to the background video.

Signature interview:

Production design with Ermanno DiFebo Orsini.

Going deeper

Metadata: Production's New Secret Sauce - Prd, Cinematic Lighting Using Only One Light - Lgt, Sound Tips for Picture Editors - Snd, Crafting the Color in American Sniper - Edt, Stabilization and Tracking in After Effects - VFX

Complementary Reading

Save the Cat - Chapter 7. As part of an examination of problems with scripts, Snyder makes some strong observations regarding what makes good dialogue.

How to Shoot Video that Doesn't Suck - Part 5: Specific Scenarios. Continuing from the previous section of the book in Unit 4, this section offers useful tips for specific projects like interviews, scripted videos, training videos, weddings, and even stunt videos.

Motion Picture and Video Lighting - Gripology (pp. 173-189) An overview of some of the most common grip equipment.

Cut by Cut: Editing Your Film or Video - Timecode (pp. 32-41).

Dialogue Editing for Motion Pictures - Chapters 12 & 13. Here we take a look at sitting dialog comfortably in the overall mix and tips and tricks for fine tuning dialogue.

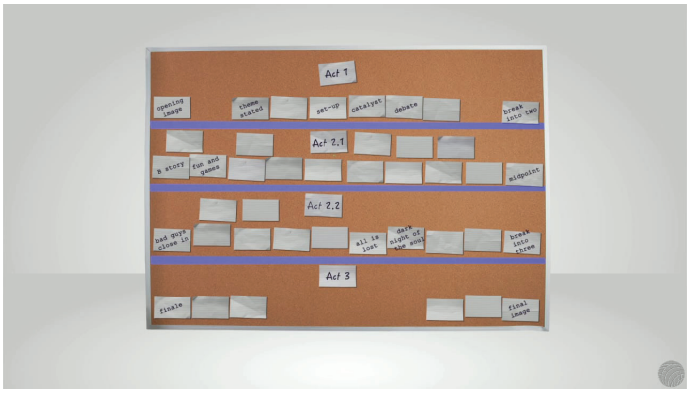
Around the web

Dialogue as action, https://vimeo.com/61232994, RT:~8min, Screenwriting, EXPLICIT

10 Best character arcs in film, https://youtu.be/23IPdgjjkME, RT:~14min, Screenwriting

Unit Five

Unit Five Core



Screenwriting: Writing the script

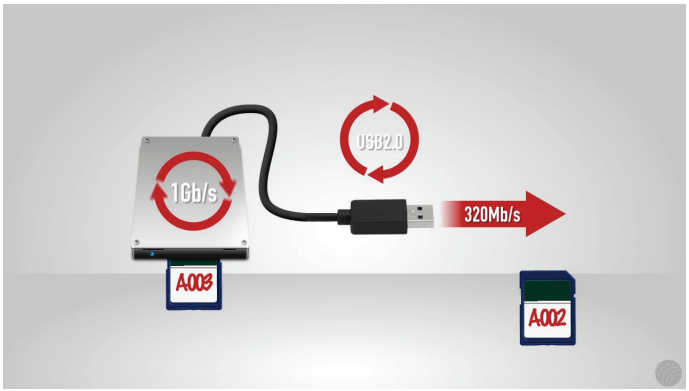
RT:~11min

Possibly the worst thing you can do when creating a screenplay is to "just start writing." Unlike a novel, screenplays have strong time constraints and failing to budget the timing of scenes can end in a film no one can bear to sit through. This set of videos covers very practically the steps involved in taking a screenplay from concept to structured story points to penned pages.

Exercise: Pick a logline from an obscure movie or create your own. As a class exercise, have students collaborate to build a short (10 scenes or so to keep things manageable) film outline, starting with the major story beats. Have each student come up with 5 potential scenes, then write them out on cards and put them all on the board. Have the class vote on which scenes to keep and which to kill and attempt to assemble a final scene structure.

Production: Data wrangling RT:~21min

Digital filmmaking and solid-state media have made filming a lot of content very affordable. At the same time, they've added the nightmare of keeping track of hours (and terabytes) of media for any given project. This series lays out a proven methodology for keeping all your media organized and securely backed up.



Exercise: Have students work through the processes outlined (including labeling) outlined in the videos, using Shotput Pro to transfer data from cards to a storage drive. (Free demo available from imagineproducts.com)

Cinematography: Camera support Pt I ("Intro" to "Tripods")
RT:~11min

Modern cinematography requires a great deal of movement. While the filmmaking of the first half of the twentieth century consisted mainly of lock-down shots, modern audiences expect kinetic activity either within the frame or via the movement of the frame itself. This set of videos gives an overview of the camera support tools available, beginning with correct counterbalance, leveling and deployment of tripods, and continuing on to dollying movements and a look at the various dollies available to the modern filmmaker, including the Dana dolly and the slider.

Exercise: Find a high-production value action TV show (e.g. a superhero show like "Arrow") and have students observe different camera moves. Have them guess what kind of camera support was used to create the move. As a second exercise, source a professional tripod with counterbalance and have each student take turns balancing, leveling, and setting the friction of the tripod head.

Lighting: Filters

RT:~12min

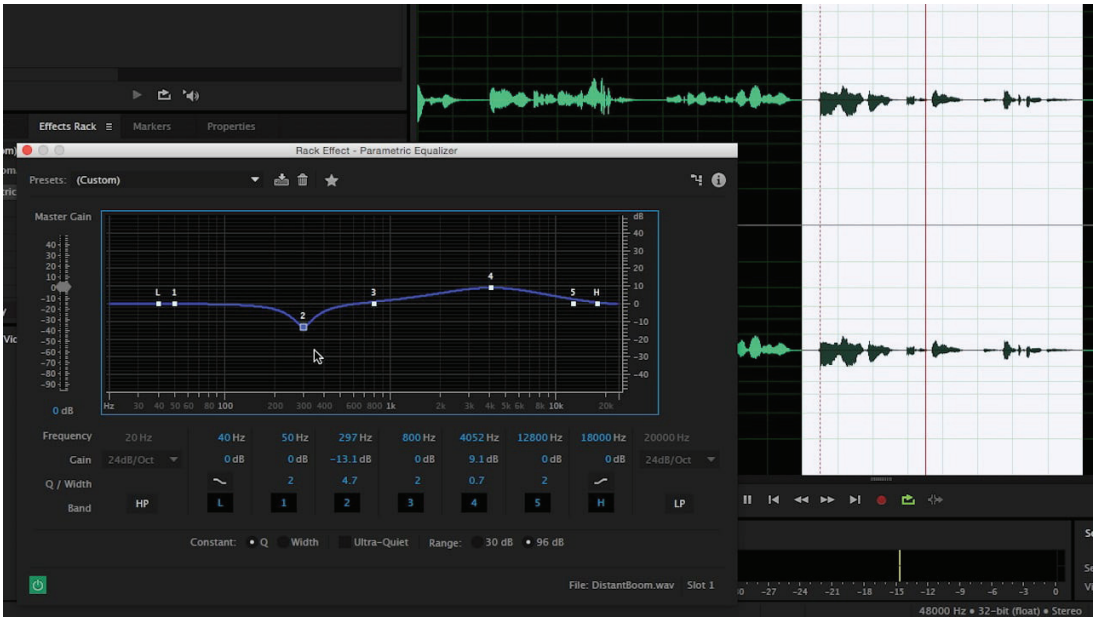
While strictly an attachment to the camera, the humble filter is inextricably tied to the lighting of the scene. Filters are one of the most overlooked tools for improving

the quality of a shot. We examine the workhorse filters that every cinematographer should be using: IR filters, ND filters, polarizers and diffusion, then take a look at the more exotic effects lenses. Finally, we help clear up when post-production filters should be used and when in-camera filters are preferable.

Exercise: Add a polarizer to a camera and show the students its effect on reflective surfaces, specular hotspots, and general color contrast. If an ND filter is available, apply it to a fast lens (f1.4 or f1.8) and show how an ND filter allows a more pronounced bokeh effect in brighter lighting conditions.

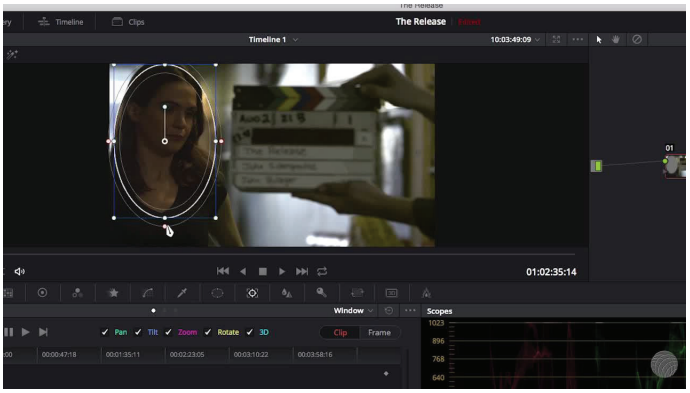
Sound: Equalization Pt I (From 'Intro' to 'Mixing Strategy') RT:~10min

Equalization is where many video editors defer to a professional audio engineer, but



basic EQ is quite achievable once the basics principles are understood. Some quick equalization can go a long way to healing otherwise obnoxious sound sources.

In this first section we take a look at the theory behind equalization, the different kinds of equalizing tools available in a standard Digital Audio Workstation (DAW), how to sweep for problem frequencies, and how to deal with EQ in the context of a mix.



Exercise: Find a selection of particularly egregious dialog tracks and have students practice sweeping for frequencies to cut.

Editorial and Color: Secondary color correction

RT:~13min

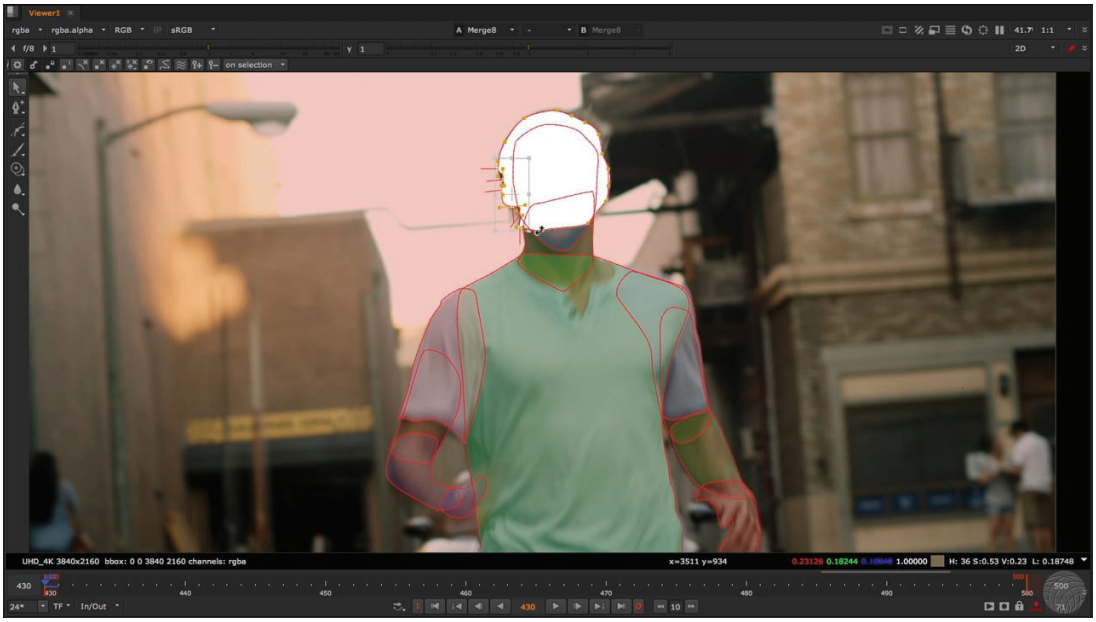
Once primary color correction is complete, secondary color correction is applied to fine-tune the color of specific objects in the scene. A large part of this is getting skin-tones to look appropriate–not too yellow, too green, or too red (unless that's the intentional effect). In this set of videos we take a look at using mattes and keys to isolate portions of an image for color correction and the use of a vectorscope to correctly orient the skin tones.

Exercise: Have students work in DaVinci Resolve (a free download from blackmagicdesign.com) to perform secondary color correction of skin tone on a clip of your choice.

VFX: Rotoscoping

RT:~15min

Even with all the technological wizardry available to modern visual effects artists, at the end of the day a lot of the work comes down to manually drawing shapes around objects that need to be isolated. This process–known as rotoscoping, or "roto" for short–isn't necessary complex, but a misunderstanding of the methodology can



be disastrous. In this set of vides we look at the curve types available for roto, the challenges of dealing with soft edges, breaking roto down into manageable pieces, and the three fundamental rotoscoping strategies: divide and conquer, even frame jumping, and points of inertia.

Exercise: Have students rotoscope (in Blackmagic Fusion or After Effects) a single actor in a shot (preferably bald or without flyaway hair) and use the matte to create a "Pleasantville"-style effect, where the actor remains in color, but everything else is desaturated to black and white. editstock.com *Whisper Fan* footage is good for this.

Signature interview:

Composing for TV and Film with Joe LoDuca and Producer to Director with Joe Lazarov.

Going deeper

Data Wrangling in the Digital Age-Prd, Cinematic Ways (4 of them) - Cam,

Most Frequently Used Filters - Lgt, LUT v. Look v. Plugin - Edt, Fast Rotoscoping Techniques with Mocha Pro - VFX

Complementary Reading

Save the Cat - Chapter 5. A solid outline of the "board" approach to compiling and organizing your script.

How to Shoot Video that Doesn't Suck - Part 6: Post-production. This section provides a simple, intuition-based approach to editing and post-production. It concentrates on problem-solving story and flow.

Cinematography: Theory and Practice - Filters (pp. 231-240). A concise summation of the most important filters for taming and enhancing images before they reach the camera sensor.

The Grip Book - Chapter 8–Techniques for Mounting the Camera. A solid summary of methods for securing a camera to non-standard surfaces and rigging equipment.

Dialogue Editing for Motion Pictures - Chapters 14 & 15. Dealing with noise and ADR are possibly the two most crucial skills for improving bad location audio. ADR is a poorly used tool at the independent film level, and so this particular chapter (ch.15) is certainly worth the time to read.

Around the web

Screenplay checklists - http://www.wordplayer.com/columns/wp05.Death.to.Readers.html

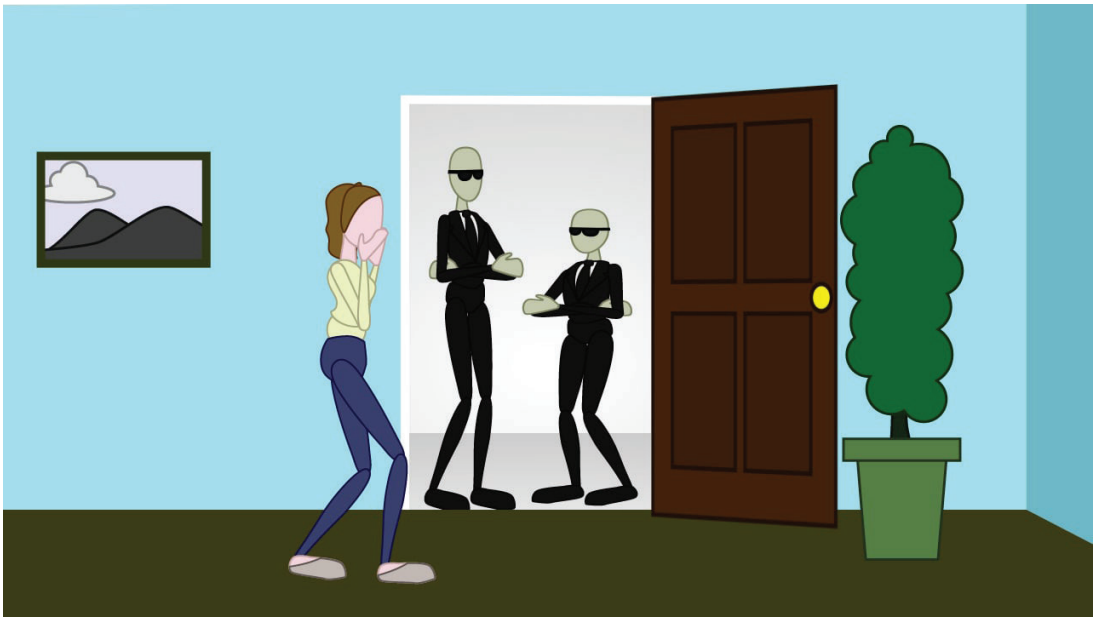
Brad Bird on animation - https://vimeo.com/189791698 - RT:~5min, Screenwriting

Unit Six

Core

Screenwriting: Solving script problems
RT:~11min

Many novice writers become discouraged when their explosive story idea fails to translate dynamically onto the page. There are many common problems that arise as a script develops, and solutions to each of them. In this series of videos on solving common screenplay issues we look at how to make a hero more appealing to an audience, how to avoid stretching the audience' credulity too far, resolving exposition problems, and amping up the intensity of the situations.



Exercise: Start with the synopsis of a movie (it can be a real one–preferably an expensive flop, or an outline you draft). Start by having students suggest ways to enhance the protagonist and the antagonist to ultimately make the protagonist more appealing. Then discuss what big movie moments you could add to the story that an audience will swallow, and what kind of things would be going too far. Finally, have the class suggest ways to bring the danger closer to the protagonist and amp up the intensity of the movie.

Production: Marking the set & Set organization
RT:~11min

In this unit we have two separate topics in the production section: Marking the set and Set organization. These are vital not only for for learning how to keep a shoot

running smoothly and without confusion, but also for a clear understanding of some of the nuances of set etiquette on a professional film or video set.

Cinematography: Camera support Pt II (Jibs and cranes to Review) RT:~12min

In this second half of the camera support section we take a look at some of the more spectacular ways to move cameras. We look at the sweeping moves produced by jibs

and their big brother, the crane, then look at stabilization systems developed to keep handheld footage from giving audiences nausea. Finally, we take a look at some of the various mount systems available for shooting action in and around cars and other vehicles.

Exercise: The exercise is largely dependent upon equipment available to demonstrate to the class. If a professional slider or jib is unavailable, look at using a poor man's steadicam (http://14dollarstabilizer.org) with a DSLR and have students experiment with creating a smooth "dollying" move. If you have a lens with hardware image stabilization, attempt the same shot once with stabilization turned off, and then again with stabilization on.

Lighting: Shooting greenscreen RT:~15min

Most people think about greenscreen as a visual effects technique. Well of course it is, but the real work is done when lighting the set. A well-lit green screen results in an easy post-production experience. Light a greenscreen poorly and visual effects in post will be a nightmare.

In this set of videos we look at the right way to light, mark and stage a greenscreen shoot, as well as the importance of choosing red, green or blue as the background color.

Exercise: If a greenscreen with lighting is available, use the demo version of Veescope Live from dvdxdv.com on a Mac to evaluate the lighting. If on PC, use the scopes from a non-linear editor to achieve the same results. If your NLE lacks real-time camera monitoring, you may need to take snapshots of video and feed them into the timeline.

Sound: Equalization Part II (Fixing sound problems to Review)
RT:~12min

In this section we take the information learned in Part I and apply it to very practical sound track issues. We look at dealing with recurring harmonics, enhancing or taming frequencies specific to male and female voices, and even some basic salvaging techniques for dialogue recorded at a distance.

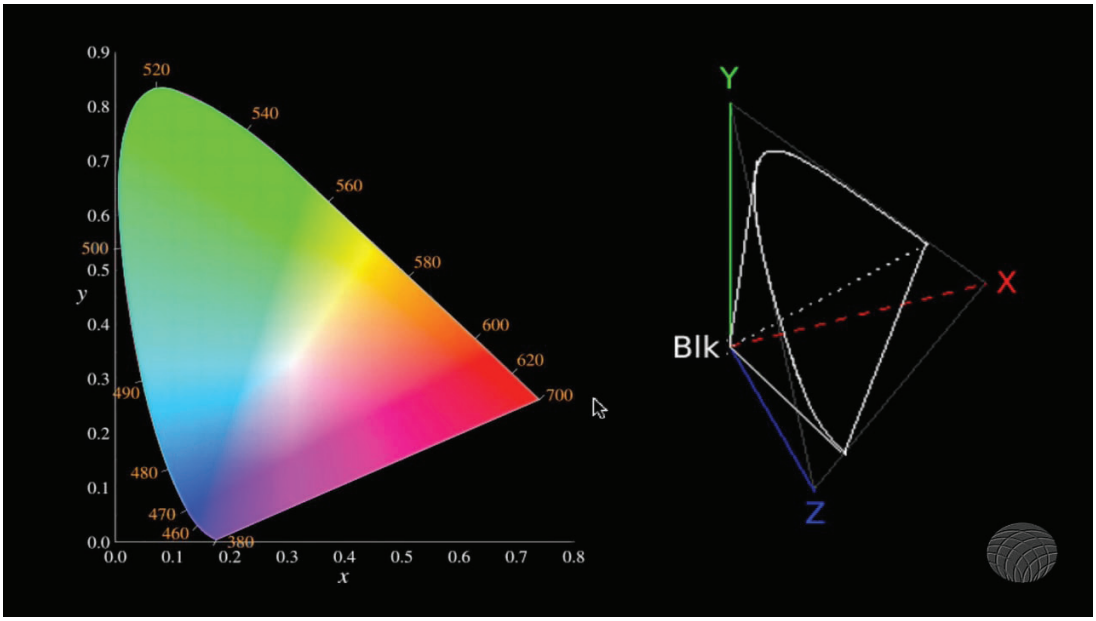
Exercise: Working with male and female voices (two or three of each with different timbres) have the students experiment with boosting and cutting the different frequencies outlined in the video.

Back of the book: you can use public domain sources like http://www.learnoutloud.com/Free-Audio/Politics/Political-Figures. Live recordings are best,

since they'll have the least post-processing already applied.

Editorial and Color: Introduction to color science with Peter Postma RT:~47min

OK, so this is a bit of a departure from the normal tight, concise format of coffee break film school. However, Peter Postma of the FilmLight group does such a comprehensive job of introducing color theory that we felt it was essential to include as part of the curriculum. At some point we plan to distill this into two or more coffee break-sized video series; until then you'll need to manage your student's attention span with this epic and densely-packed hour of color wisdom. NB: The official runtime of the video is 1 hour, 12 minutes, but the core part of the video ends

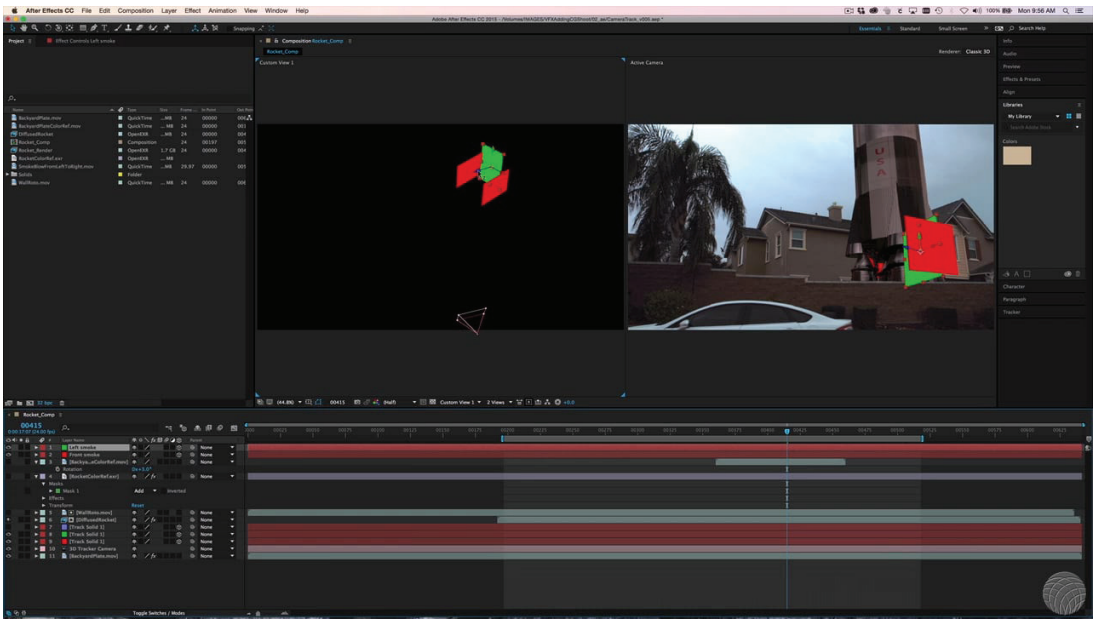


at the 50 minute marked, followed by Q & A.

Exercise: Given the length of the video, it's probably best to limit the exercise in this section to light discussion of what was covered and any confusion that may need to be cleared up by further research.

VFX: Adding CG to live action

Of all the videos, this is probably the most technically complex. Nonetheless, it's delivered in a style that should prove helpful as an overview for students looking to direct visual effects, even if they don't create the effects content personally. For students with more of a leaning toward the technical or artistic, this should



additionally serve as a step-through process which can be repeated for their personal projects.

Exercise: To re-iterate: this is for students who take an interest in going deeper in visual effects; students with a casual interest will find themselves frustrated trying to get to a satisfying level of completion. Watch the Going Further video, "Adding CG to your next movie", for reinforcement of the basic techniques, then have students choose a simple model like a statue to integrate into their scene.

Signature Interviews

Star Wars: The Force Awakens with Maryann Brandon & Mary Jo Markey and Star Wars Editor with Paul Hirsch

Survival guides

Cinema 4D, Houdini

Going deeper

Fixing it in Post: Common Sound Issues - Snd, Shooting and compositing greenscreen with Brad Wright - Lgt, How to Get the Most from a Green Screen - Lgt, Test Charts for Production - Edt, Jazzing up graphics with Cinema 4D - VFX, Creating Better Pictures: HDR Color Grading and Mastering - Clr

Complementary Reading

Save the Cat - Chapter 6. Along with chapter 7 from the previous unit, this offers a great deal of insight into the problems that plague many scripts and how to fix them.

How to Shoot Video that Doesn't Suck - Part 7: Delivery. An overview of the process of reviewing and finalizing a video project.

Motion Picture and Video Lighting - Lighting for Process Photography (pp. 227-231). A useful–if a little brief–guide to greenscreen and bluescreen work. More a collection of tips than a comprehensive how-to, the tips are nonetheless valid and helpful.

The Grip Book - Chapters 11-15–Cranes, Jibs, Arms, Dollies, and Heads. Again a great summary section to skim, augmenting what was covered in the core. Some of the content is more for reference, but it's useful for students to look over it and become aware of the content if they need it for a shoot later in their career.

Dialogue Editing for Motion Pictures - Appendices A and B. Incredibly useful step-by-step guides to a complete audio sweetening routine, and a basic track layout for a generic session.

Around the web

Visuals and action, https://vimeo.com/67251879, RT:~14min, Screenwriting, EXPLICIT, NUDITY

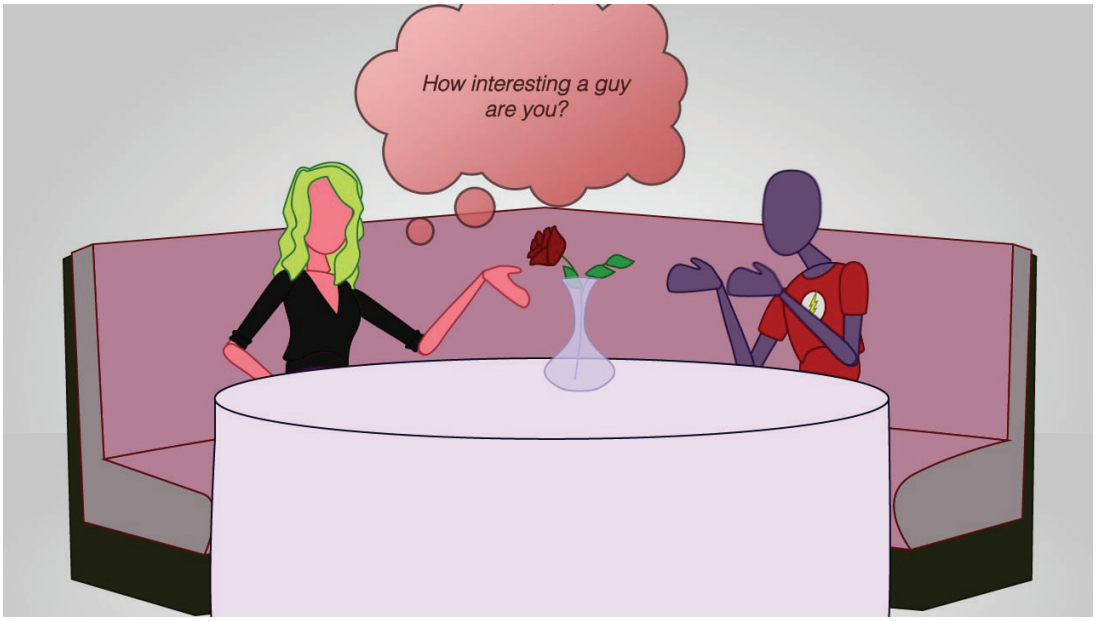
Expanded Curriculum: Project-Based Course

Unit 1 - Screenwriting

Basic structure of a screenplay RT:~15min

This series of videos covers the core concepts of a compelling story. It's critical that students understand the importance of adhering to fundamental story structure. Students are often resistant to applying a "formulaic" structure to their pre-existing story ideas. The videos actually address this point, with the comparison to the verse/chorus structure of just about every pop song ever written.

The exercise below will help reinforce the point by identifying the beats in existing films. If you have particularly vocal and passionate opponents of the idea of structural adherence, you may want to perform the exercise with one of their favorite films to see if it aligns with basic story structure.



Exercise: Fill out a BS2 (Blake Snyder Beat Sheet) for two different movies. This works best as a homework assignment. As a class, students can then discuss their choices for the various elements of the BS2. A final BS2 drawn from the consensus of the class can be compiled and kept as a reference.

Since story is so critical, consider weekly BS2 evaluation assignments for different films throughout the course. Look for films that are either airing that week on free-to-air or currently free as part of a subscription service like Netflix to reduce the financial impact on students. You can choose from the list at savethecat.com (see "Back of the book" below) in order to have an existing reference beat sheet.

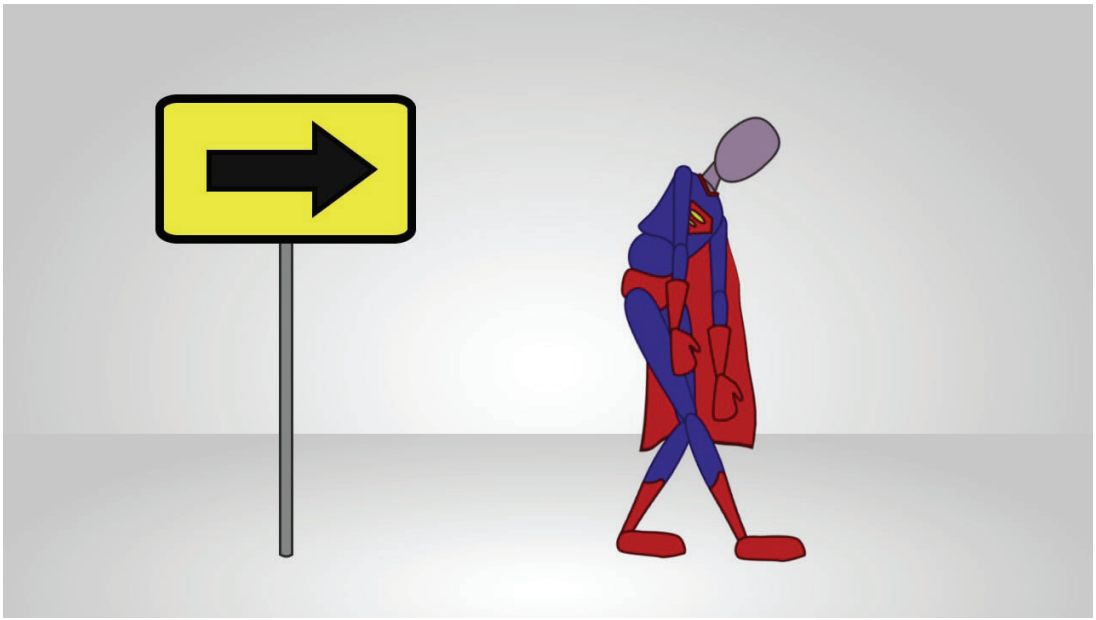
Back of the book: http://www.savethecat.com/beat-sheets-alpha contains a list of beat sheets created for popular movies. These, of course, are someone else's opinion, but they'll make for a good benchmark against which to compare students' evaluations.

Creating believable characters RT:~7min

On screen characters are a hyperbolic representation of real-world people. Creating compelling characters in a screenplay requires not only an understanding of their motivations, but also the roles they play in the story. Some characters require greater dimension, others can exist as the story equivalent of a cardboard cutout.

This set of videos examines the basic principles of developing characters. "Creating believable characters II" will look more specifically at the protagonist and antagonist.

Exercise: Have students identify someone in their circle of relationships whose life they consider to be interesting. They should then outline the screen version of that person, intensifying their character traits and the severity of their circumstances. Have them create a fictitious contradiction between the person's daily life and their character. Finally, they



should determine how in their story the character of the person will overcome the characterization. As a bonus exercise, have the students add complexity to their person by adding some opposite personality traits, eg. a good father hiding an addiction to gambling.

Creating believable characters II RT:~12min

In this section we hone in on the all-important protagonist of the story. We look at the protagonist's desire, will power, empathy, protagonist archetypes and the vital concept of character arc. (Characters must arc to create a satisfying sense of closure– if scriptwriters botch the arc the whole story falls apart.) We also look at designing a supporting cast around the protagonist and the importance of an antagonist to create contrast in the protagonist.

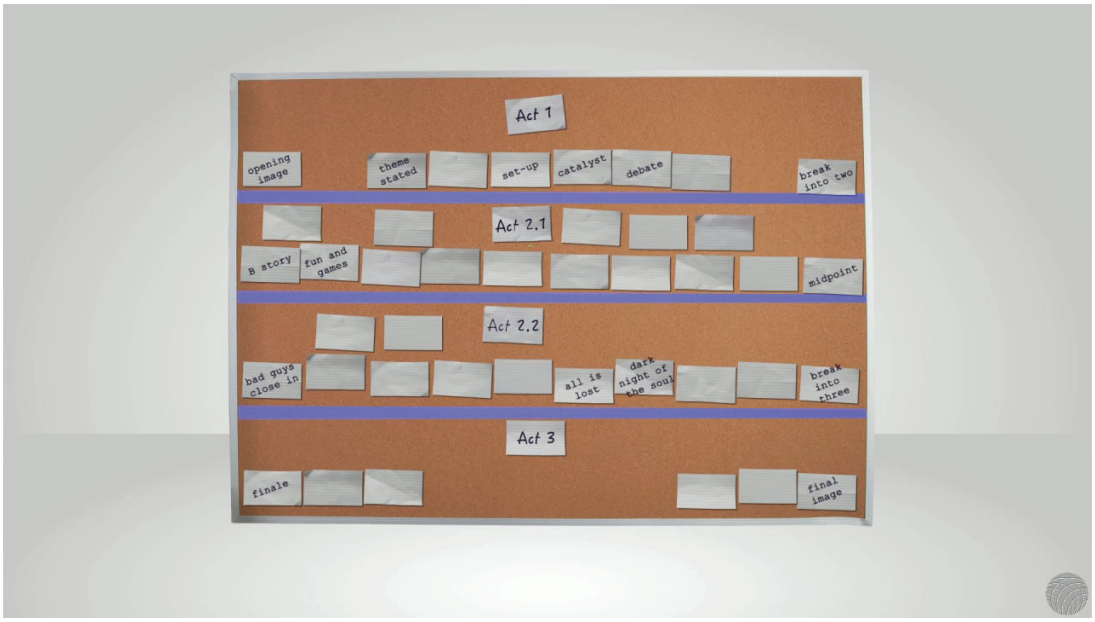
Exercise:

This section has the most exercise time of the screenwriting scripts to date. Consider splitting the exercises across multiple classes, or divide between in-class and homework assignments.

1. Students can take the character they created in the previous scriptwriting exercise (or start a new one if they're not happy with their initial choice) and incorporate the new information to sculpt a fully formed protagonist (key desire(s), identify the kind of hero, determine what arc would be appropriate in a story).

2. Students should now create an antagonist worthy of the protagonist, one that generates a significant contrast in the story.

3. As a final exercise, have students create 1-2 pages of dialogue between their



protagonist and a complementary character (a spouse, a co-worker etc. but *not* the antagonist). Then–as a class exercise–choose a handful of scripts and read them to the class without identifying which character is saying what line. The idea is to decide whether the personalities are unique enough to pass the "limp and an eyepatch" test. You may want to skip past the first couple of intro lines of dialog which could otherwise "spell out" which character is which. Use the same voice to deliver both lines–avoid character voicing which would again allow students to keep track of the difference between characters. We want the focus to be on the dialog content differences.

All about dialogue RT:~11min

Many screenplays with great story concepts fall apart because of weak dialogue. Ideally every word of every line of dialogue in a screenplay should be carefully chosen for subtext and impact. In this set of videos we review the hyperrealism of screen dialogue, creating dialogue that aligns with a character's personality, compression in dialogue, the all-important topic of subtext rears its head yet again, and we discuss the power of drawing from emotional memory to create authentic and poignant exchanges. Finally, we visit the sticky subject of a necessary evil: exposition, and look at ways to make it a natural part of the storyline.

Exercise: have the class write a page of dialog between a detective and a (yet to be charged) serial killer in a police interrogation room. See if they can create dialog that sounds mundane but carries a menacing subtext.

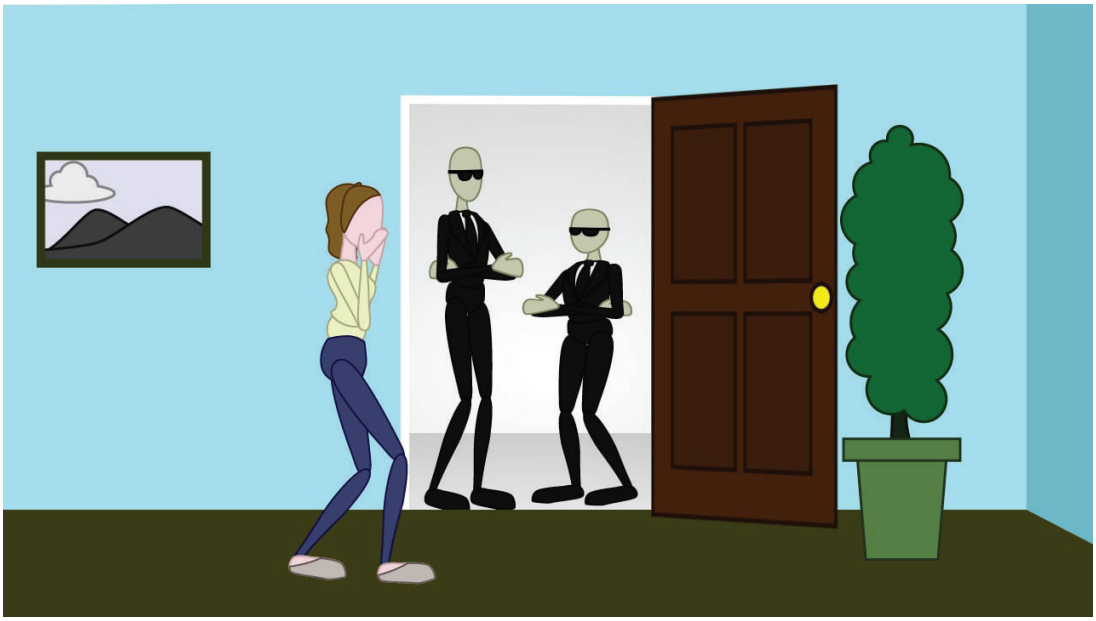
Writing the script RT:~11min

Possibly the worst thing you can do when creating a screenplay is to "just start writing." Unlike a novel, screenplays have strong time constraints and failing to budget the timing of scenes can end in a film no one can bear to sit through. This set of videos covers very practically the steps involved in taking a screenplay from concept to structured story points to penned pages.

Exercise: Pick a logline from an obscure movie or create your own. As a class exercise, have students collaborate to build a short (10 scenes or so to keep things manageable) film outline, starting with the major story beats. Have each student come up with 5 potential scenes, then write them out on cards and put them all on the board. Have the class vote on which scenes to keep and which to kill and attempt to assemble a final scene structure.

Solving script problems RT:~11min

Many novice writers become discouraged when their explosive story idea fails to translate dynamically onto the page. There are many common problems that arise as a script develops, and solutions to each of them. In this series of videos on solving



common screenplay issues we look at how to make a hero more appealing to an audience, how to avoid stretching the audience' credulity too far, resolving exposition problems, and amping up the intensity of the situations.

Exercise: Start with the synopsis of a movie (it can be a real one–preferably an expensive flop, or an outline you draft). Start by having students suggest ways to enhance the protagonist and the antagonist to ultimately make the protagonist more appealing. Then discuss what big movie moments you could add to the story that an audience will swallow, and what kind of things would be going too far. Finally, have the class suggest ways to bring the danger closer to the protagonist and amp up the intensity of the movie.

Unit 2 - Production

Gripology RT:~15min

The world of film and video production is filled with a weird and wonderful array of oddly and sometimes inappropriately named pieces of support gear. Understanding what's out there and how to use it is fundamental to perfecting basic on-set staging. This series of videos covers the most significant pieces of set gear, right down to milk

crates and “furni” pads.

Exercise: As a classroom exercise, have students set up and strike a C-stand, adding a weighted light to the stand and sandbags to legs. Ensure observance of the right hand rule when positioning the C-stand.

Obviously your ability to demonstrate gear in class will be dependent on your actual inventory of grip gear. As much as you can, though, take this time in the course to familiarize the students with any grip equipment at their disposal for shooting their own content during the course.

Slating RT:~11min

Possibly the most iconic item in filmmaking, the slate is a vital part of a professional movie set. And yet the majority of people outside the professional film industry either don’t use one or don’t know how to make the most of it.

This series goes over the purpose of a slate, correct protocol for slating, the purpose and meaning of obscure symbols on the slate, and correct set etiquette.

Exercise: Since this is primarily informational, you can run the following spot quiz:

1. What does MOS signify for a take?
2. What are soft sticks?
3. What are second sticks? What are the two reasons for performing second sticks?
4. What is tail slating?

Back of the book: 1.It informs the editor that there is no significant sounds associated with the take. 2.Sticks performed quietly so as not to disturb a nearby actor. 3.A clap repeated during a single take. Used for multiple camera sync when all cameras cannot see the slate simultaneously & used when the execution of the first clap is flawed in some way. 4.Clapping the slate at the end of a take.

Electricity RT:~16min

Generating the amount of light required for creative studio lighting requires a lot of electricity. Electricity can have the unpleasant side-effect of killing or seriously injuring people. As such this course covers the essential information for working with electricity and calculating load balances to avoid tripping breakers during a shoot.

Exercise: If available, take students through the process of continuity testing a light in preparation for a shoot. Ideally, if your institution has a dedicated facilities manager handling electrical you could try to coordinate an in-class presentation or interview with them. This is especially helpful if trying to communicate local ordinance electrical requirements.

Timecode and logging RT:~10min

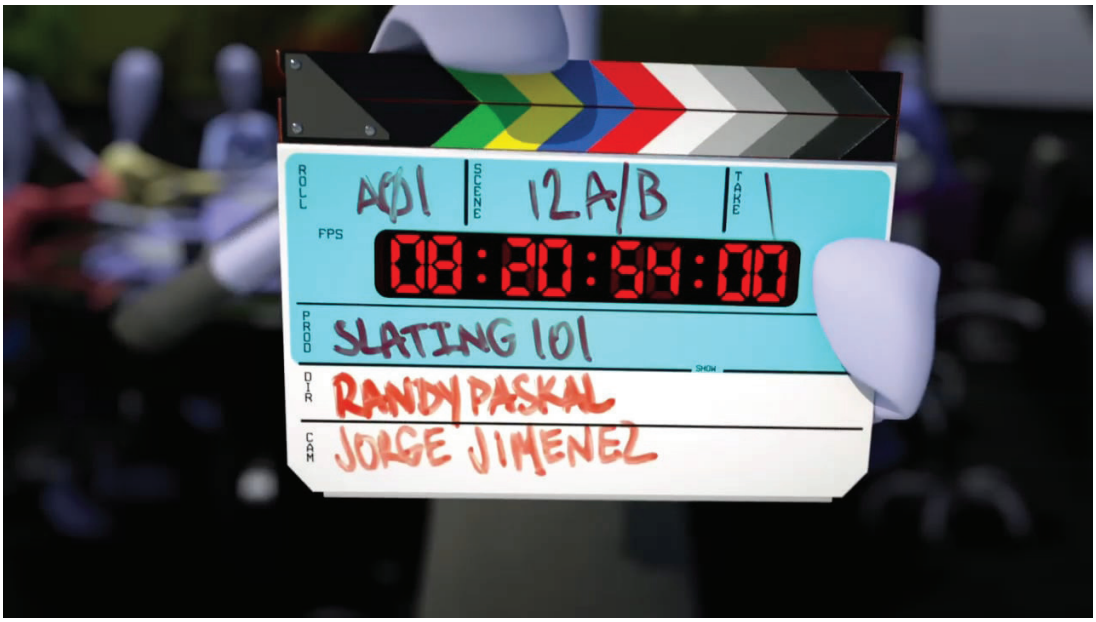
No way to sugar coat it: this is not going to be the most exciting class for students. Nonetheless the subject matter is extremely important. Understanding timecode and alternate sync methods is vital in the modern world of mixed camera environments.

Exercise: Have all students with smartphones point their smartphones at the same location and start recording video on each. Use either a clapper or a hand clap to create a sound sync. Have someone perform an activity that everyone films. If you have a musician in the class (eg. acoustic guitarist) have them perform. Let students experiment with different framings, but don't let the recording go for more than about three minutes.

Import the video clips onto one computer (via email, Android transfer, or iOS Airdrop. If you're not familiar with these

approaches, there's bound to be a geek in the class who can assist:)) and use the audio sync option in Resolve, Premiere Pro or Final Cut Pro X to sync all the sources as a single multicam clip using the initial clap. Now edit the multicam clip and see how successfully each camera angle was synced. (For a review of multicam and audio sync, watch the survival guide for the editing software you're using).

Given that this is the most common form of sync for student film projects, this is an ideal exercise to get them familiar with the process.



Data wrangling
RT:~21min

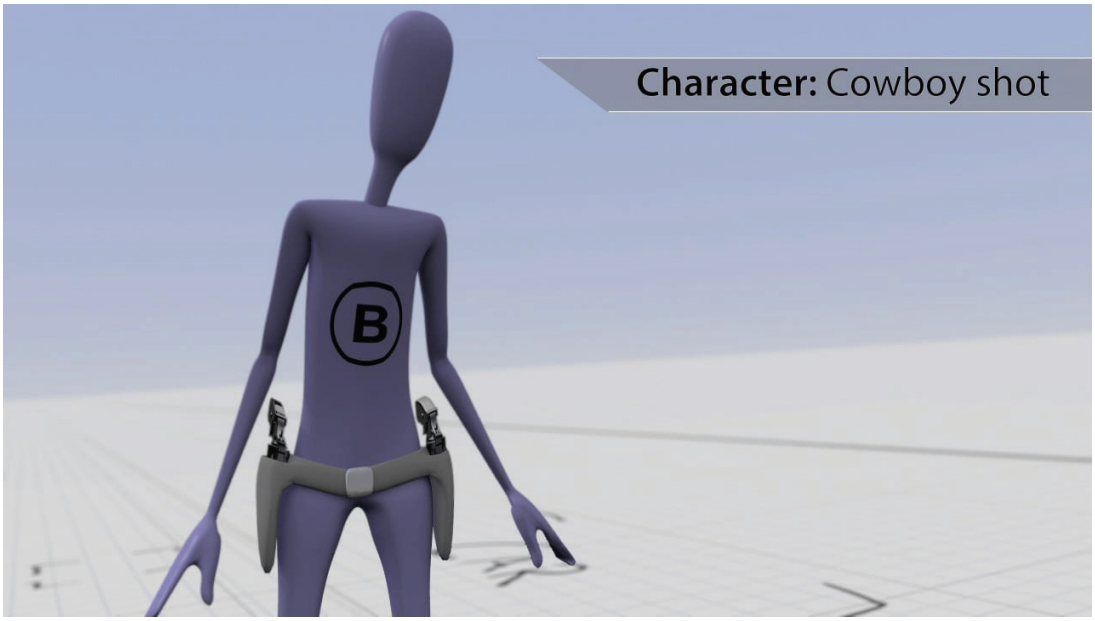
Digital filmmaking and solid-state media have made filming a lot of content very affordable. At the same time, they've added the nightmare of keeping track of hours (and terabytes) of media for any given project. This series lays out a proven methodology for keeping all your media organized and securely backed up.

Exercise: Have students work through the processes outlined (including labeling) outlined in the videos, using Shotput Pro to transfer data from cards to a storage drive. (Free demo available from imagineproducts.com)

Marking the set & Set organization RT:~11min

In this section we have two separate topics: Marking the set and Set organization. These are vital not only for for learning how to keep a shoot running smoothly and without confusion, but also for a clear understanding of some of the nuances of set

etiquette on a professional film or video set.



Unit 3 - Cinematography

Shot types RT:~11min

Shot descriptions are the very basic language of cinematography. This section of videos covers both scene framings and character framings–the terminology and the visuals.

Exercise: Find a scene that moves from establishing shots through to character shots. Have students identify each shot type. Part of the exercise is to build awareness of shot choice so that students can begin to deconstruct the films and TV shows they're watching to learn from other filmmakers.

Back of the book: For a nice summary, work through the examples found here: http://www.empireonline.com/movies/features/film-studies-101-camera-shots-styles/

Framing RT:~15min

In this section we get to the heart of shot design, covering the fundamental principles of composition. We begin with the rule of thirds, then go deeper into the importance

of dimensionality in staging a shot.

A good portion of the series is given to framing actors and providing the appropriate headroom for a shot. Finally, lens and aperture choice is explored, including the logic behind choosing a wide angle lens over a narrow lens for a given shot.

Exercise: If available, connect a camera with zoom lens (a DSLR will do) to an HDMI monitor so that the entire class can see. Using a small set of props (items from a doll house are ideal), adjust zoom, camera position and aperture to see the effects. If you have a fast lens available (like a 50mm prime with a 1.4 or 1.8 aperture) take a look at the bokeh effect of shooting something close up at wide aperture.

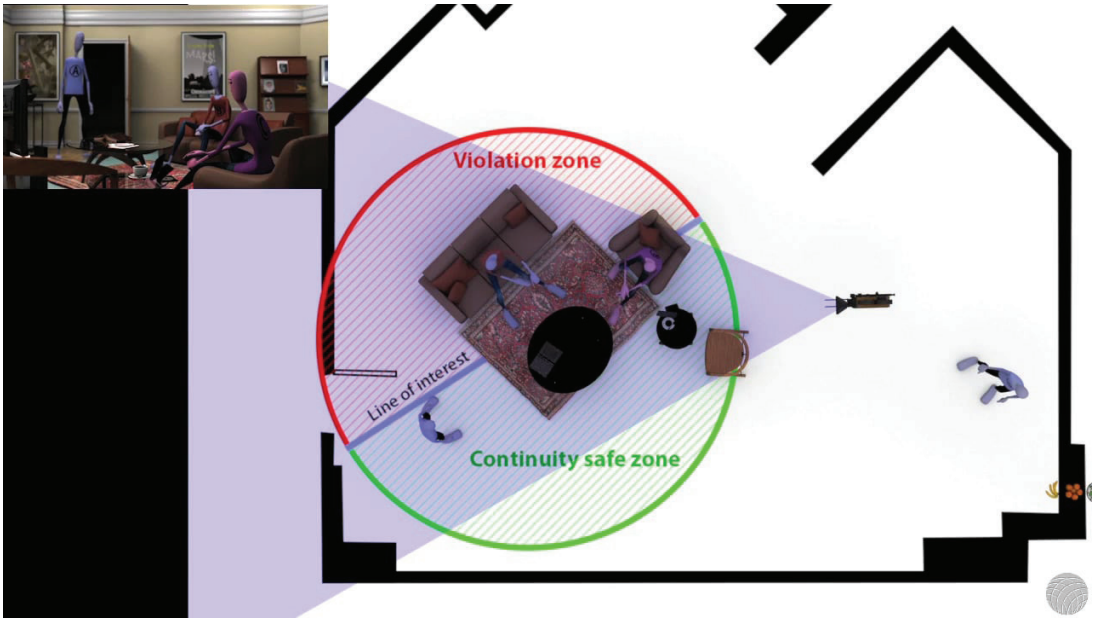
Experiment with different prop positioning to see the effect on dimensionality. Explore leading lines and continuing lines out beyond the frame.

Coverage RT:~10min

Here we move on to the process of capturing on set everything needed for the edit. This builds on both the “Shot types” and “Framing” videos. We look at the classic master scene method of coverage and then discuss why it actually doesn’t work for much of modern filmmaking. We look at the alternate concept of progressive reveal and discuss the all-important line-of interest in detail.

Exercise: As with framing in the previous section, use set pieces from a doll set to experiment with various angles of coverage. Try taking 10 second clips of the different angles you choose and then have the students try their hand at editing

them into a story in a Non-Linear Editing application. They can add their own dialog and music (in a Mystery Science Theater style–if you're unfamiliar with the concept, look here: http://mst3k.com/where-to-watch/) and attempt to create a satisfying edit from reveal to completion.



Continuity RT:~10min

We've touched on the idea of the line of interest a couple of times, but here we go into detail about what it actually means and solutions for crossing the line safely when the need arises. We then look at continuity of content, time, and motion in filmmaking.

Exercise: rent a fifties B-movie (or watch a public domain one online) and have students identify breaks in continuity between cuts and takes–especially a scene where people are eating or handling props. As an additional exercise, ask the students whether they feel they would have noticed those things if they weren't looking for them and at what point a good edit becomes more important than maintaining perfect continuity.

Camera support Pt I ("Intro" to "Tripods") RT:~11min

Modern cinematography requires a great deal of movement. While the filmmaking of the first half of the twentieth century consisted mainly of lock-down shots, modern audiences expect kinetic activity either within the frame or via the movement of the frame itself. This set of videos gives an overview of the camera support tools available, beginning with correct counterbalance, leveling and deployment of tripods,

and continuing on to dollying movements and a look at the various dollies available to the modern filmmaker, including the Dana dolly and the slider.

Exercise: Find a high-production value action TV show (e.g. a superhero show like "Arrow") and have students observe different camera moves. Have them guess what kind of camera support was used to create the move. As a second exercise, source a professional tripod with counterbalance and have each student take turns balancing, leveling, and setting the friction of the tripod head.

Camera support Pt II (Jibs and cranes to Review) RT:~12min

In this second half of the camera support section we take a look at some of the more spectacular ways to move cameras. We look at the sweeping moves produced by jibs and their big brother, the crane, then look at stabilization systems developed to keep handheld footage from giving audiences nausea. Finally, we take a look at some of the various mount systems available for shooting action in and around cars and other vehicles.

Exercise: The exercise is largely dependent upon equipment available to demonstrate to the class. If a professional slider or jib is unavailable, look at using a poor man's steadicam (http://14dollarstabilizer.org) with a DSLR and have students experiment with creating a smooth "dollying" move. If you have a lens with hardware image stabilization, attempt the same shot once with stabilization turned off, and then again with stabilization on.

Unit 4 - Lighting

Introduction to lighting RT:~12min

Before students learn light staging techniques like three point lighting, it's good to have a grounding in the fundamental aspects of light quality, terminology, temperature and source color. We'll be building on these fundamental concepts in future courses, so it's essential that students get a good grasp of them at this point.

Exercise: Have students identify light sources in the room, estimate the color temperature of the lighting, observe the color bounce from one surface to another, and note the softness of the penumbra of shadows in the room.

Three point lighting RT:~10min

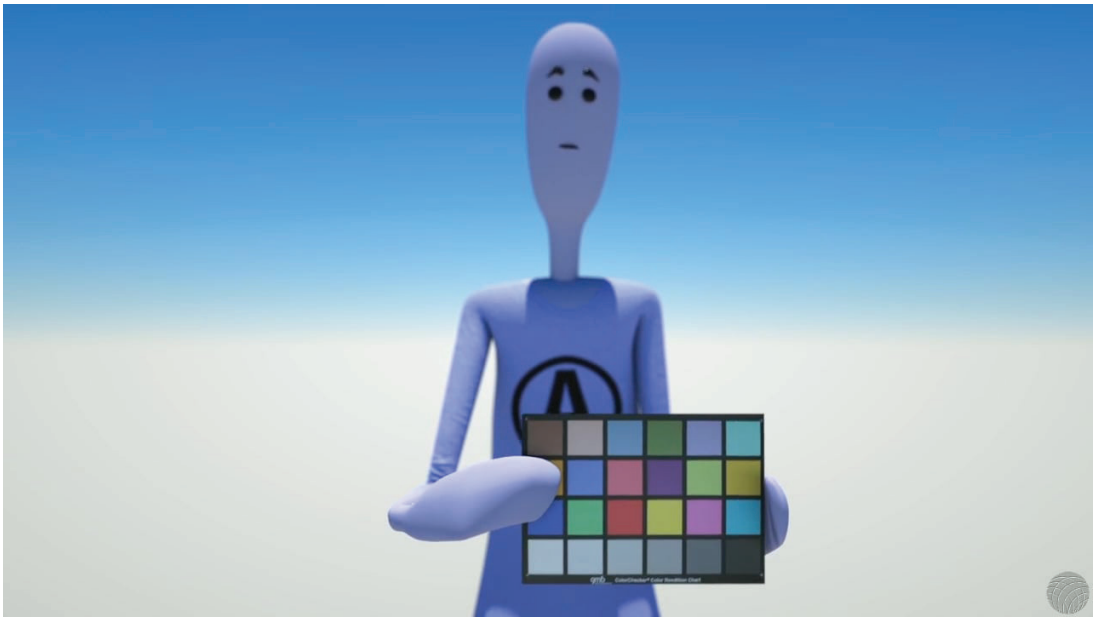
The most significant lighting setup in both still photography and moving pictures is the three point lighting setup. Yet remarkably very few people know how to do it correctly. Here we carefully and scientifically drive home the standard positioning of all three light sources and explain the desired facial shadow direction and how to vary contrast. We also review the use of additional lighting to enhance the look of a shot.

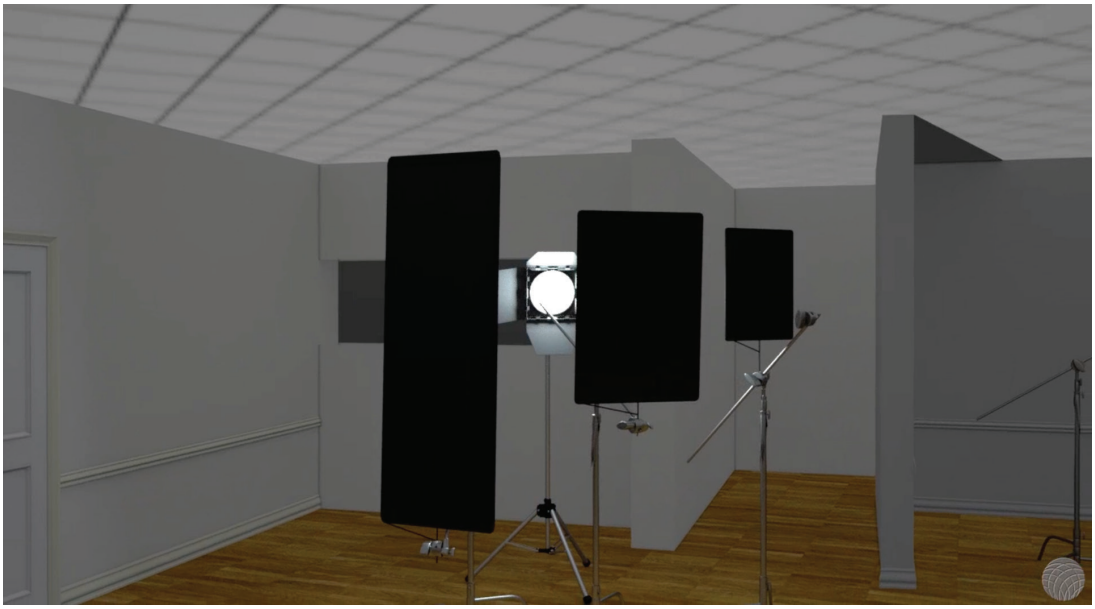
Exercise: Try to recreate the basic three point lighting setup in class. You may be limited in height and unable to get a true 45° raise of the key light off the floor; in such cases, just get it as high as possible. As a second exercise on a sunny day, take some white foam core and experiment with using the foam core as a bounce source reflecting the sunlight (see the end of the overview video).

Lighting control RT:~14min

Color control is an extremely important aspect of lighting. Understanding how scene color is affected by quality of light fixtures, mixed light sources, and the use of scrims and dimmers will go a long way toward improving production values. Students will learn the difference between grabbing some work lights from a hardware store and using custom-designed production lighting. They'll also learn the importance of balancing light sources and dealing with conflicts between daylight and interior lighting.

Exercise: Find a few different portable lights sources: desk lamps, fluorescent lamps, LED lamps, work lights, and/or production lighting and film a human subject sitting at a desk with as many colored items on the desk as possible. Include a piece of white paper that can be used for white balancing in post. Capture with a camera set to a single white balance. Bring them into an NLE and compare the different shots. Then white balance each shot in the timeline using the piece of white paper and compare the result. Have students note the quality difference in overall color even when all shots are white balanced to the same white point.





Shaping light RT:~11min

One of the greatest misconceptions about lighting is that adding more lights is the solution to fixing issues. In fact, cinematic lighting is as much about subtracting light as it is adding it. This series of videos introduces the various on-set tools for shaping light: barn doors, louvers, flags, nets, cookies and silks.

Exercise: Combine a single production light with a bounce card (could be cheap white foam core) and some flags (or black foam core if on a budget). (You may want to watch "One Light" with Barry Anderson in the Going Deeper section first.) Have students experiment to see how many different ways they can light a seated subject using just that one light and the light shaping reflector and flags.

Filters RT:~12min

While strictly an attachment to the camera, the humble filter is inextricably tied to the lighting of the scene. Filters are one of the most overlooked tools for improving the quality of a shot. We examine the workhorse filters that every cinematographer should be using: IR filters, ND filters, polarizers and diffusion, then take a look at the more exotic effects lenses. Finally, we help clear up when post-production filters should be used and when in-camera filters are preferable.

Exercise: Add a polarizer to a camera and show the students its effect on reflective surfaces, specular hotspots, and general

color contrast. If an ND filter is available, apply it to a fast lens (f1.4 or f1.8) and show how an ND filter allows a more pronounced bokeh effect in brighter lighting conditions.

[Lighting: Shooting greenscreen] RT:~15min

Note: this section is currently in development and should be available on the site mid-2017

Most people think about greenscreen as a visual effects technique. Well of course it is, but the real work is done when lighting the set. A well-lit green screen results in an easy post-production experience. Light a greenscreen poorly and visual effects in post will be a nightmare.

In this set of videos we look at the right way to light, mark and stage a greenscreen shoot, as well as the importance of choosing red, green or blue as the background color.

Exercise: If a greenscreen with lighting is available, use the demo version of Veescope Live from dvdxdv.com on a Mac to evaluate the lighting. If on PC, use the scopes from a non-linear editor to achieve the same results. If your NLE lacks real-time camera monitoring, you may need to take snapshots of video and feed them into the timeline.

Unit 5 - Sound

Operating a boom mic RT:~8min

Capturing good sound on set is crucial; botch it and nothing short of ADR (Automated Dialog Replacement) will remedy the situation. To that end, we've put boom operation right here in our first session on sound. Once students have viewed this set of videos they'll have an understanding of how to capture competent set audio.

Exercise: Have students try holding a boom mic using different stances. Let them hold for 2-3 minutes at a time to get a sense of the fatigue produced by different holding positions.

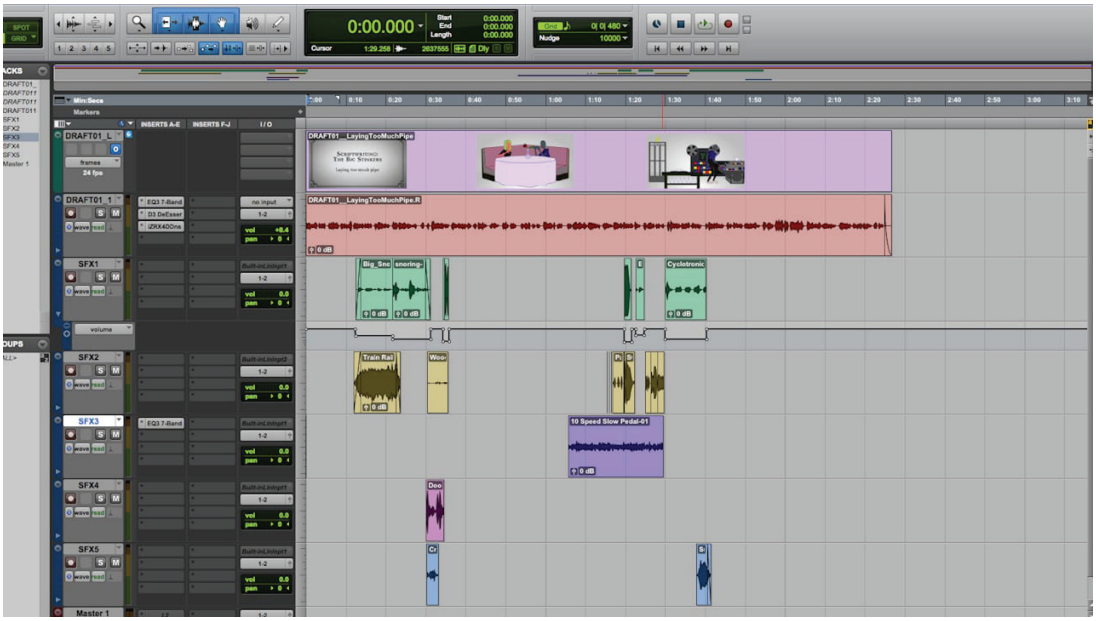
Next, record one of the students with the boom held at different positions with different aims. You may want the "presenter" student to say the position and aim of each boom placement, so that when you listen back you'll have a direct reference for each recorded phrase. Listen back to the audio with some reasonable monitor speakers and observe with the class the different qualities of the sound for each recording.

Back of the book: Use the Moviola "AsAnActor.mov" clip to review boom sounds if you lack access to a boom in the classroom. Despite the animation, this is actually a real boom recording, as you'll see when the boom occasionally enters frame. You'll hear the various sounds produced by the boom as it moves towards and away from the actor and swings off-axis. Also note that from 30s-40s into the video you're actually hearing a chest-worn lavaliere signal as a comparison to the tone of the boom.

Lavalliere RT:~5min

One of the shorter fundamentals, but extremely important nonetheless. This set of videos covers the process of correctly concealing a lavallière mic for optimal sound while using moleskin to hide its presence and reduce fabric noise.

Exercise: Try miking a subject using a moleskin in such a way that its presence (and the presence of cable or wireless pack) is hidden from camera.



Postproduction Sound Pt 1 (From 'Intro' to 'Fixing Flubs') RT:~16min

In this set of videos we focus on creating a balanced soundtrack from the various sound sources in a film project - dialogue mics, ambience, foley, sound effects, and music. We look at fixing phasing issues, sorting and determining the best source mic for each performance, and repairing flubbed audio without having to resort to automated dialog replacement.

Exercise: If one or more of your students have already completed shooting a project, have the class organize and arrange the mic sources in your DAW (Digital Audio Workstation) of choice, using the checkerboarding system. If not, you can use the following footage from editstock.com: *Come and Get It* and *The Boxer* for sound effects, *Pin It* for dialog noise reduction, and you can review *Built By Life* for an example of good sound with simple sound effects.

Post production sound Pt 2 (From 'Setting Levels' to 'Review') RT:~16min

While sound engineers spend years perfecting the art of mixing, there are basic strategies for creating a balanced mix between dialogue mics, sound effects and music. In this section we look at where to set the various levels, how to add an appropriate level of sound effects, foley and ambient sound effects, sound continuity, and adding music in a transparent way. We conclude with a quick discussion about the importance of a neutral monitoring environment.

Exercise: Continue with the set up mix from the previous sound exercise and have students attempt to mix and pan levels correctly, then add foley, ambient sounds and music.

Equalization Pt I (From 'Intro' to 'Mixing Strategy') RT:~10min

Equalization is where many video editors defer to a professional audio engineer, but basic EQ is quite achievable once the basics principles are understood. Some quick equalization can go a long way to healing otherwise obnoxious sound sources.

In this first section we take a look at the theory behind equalization, the different kinds of equalizing tools available in a standard Digital Audio Workstation (DAW),

how to sweep for problem frequencies, and how to deal with EQ in the context of a mix.

Exercise: Find a selection of particularly egregious dialog tracks and have students practice sweeping for frequencies to cut.

Equalization Part II (Fixing sound problems to Review)
RT:~12min

In this section we take the information learned in Part I and apply it to very practical sound track issues. We look at dealing with recurring harmonics, enhancing or taming frequencies specific to male and female voices, and even some basic salvaging techniques for dialogue recorded at a distance.

Exercise: Working with male and female voices (two or three of each with different timbres) have the students experiment with boosting and cutting the different frequencies outlined in the video.

Back of the book: you can use public domain sources like http://www.learnoutloud.com/Free-Audio/Politics/Political-Figures. Live recordings are best, since they'll have the least post-processing already applied.

Unit 6 - Editing and Color Correction

Introduction to Editing
RT:~14min

There are many courses on how to perform edits using different non-linear editing software packages, but here we focus in on the aesthetics of editing. How edits inform subtext, the emotional significance of different editing techniques and the role of suspense and surprise are all covered.

This course complements the discussion of subtext in the scriptwriting structure series of videos.

Exercise: Using editstock.com *Pool Party* or *Bingo Night Heist* footage (or some other source of raw dailies media) have students attempt to edit two different versions of the same short film. In the case of *Bingo Night Heist,* one should emphasize drama, the other comedy. See if they can alter the

subtext conveyed by the same lines of dialog by making alternate editing choices. For *Pool Party* students can attempt to cut one version that emphasizes bravery, another that emphasizes shyness.

The mechanics of editing RT:~18min

Here we cover some of the fundamental techniques of editing, including rules of continuity, cuttable angles of difference, cutting into and out of moving shots, L-cuts, cutting for actor performance, and timing considerations.

Exercise: Assign students editstock.com *Gnarly in Pink* footage (or some other source of raw dailies media) and have them attempt to create a piece with: 1) at least three different angles along the same side of "the line", 2) a jump cut that has a legitimate motivation, and 3) a natural cut from a moving shot to a static shot or vice versa. Obviously it's essential that you choose footage that offers multiple angles (and at least one that would violate the 180 degree rule if used incorrectly).

Color correction fundamentals
RT:~14min

Color correction used to be very specialized and something of a "dark art," but economic pressures in the industry have forced editors to take on the role of colorist, especially in the broadcast sector. As such it's more important than ever that filmmakers have a clear grasp of the science and art of color correction. In this first section of a two part series we look at the basic issues of viewer subjectivity, the way

the brain compensates based on context and perceptual history, using scopes as an objective measure of color values, and the concept of clipping and crushing the black and white points of an image.

Exercise: This is a great opportunity to work through optical color illusions to help students understand just how *untrustworthy* their color perception is. (At time of writing, a good collection of illusions can be found at: http://www.archimedes-lab.org/color_optical_illusions.html)

Color correction part II RT:~22min

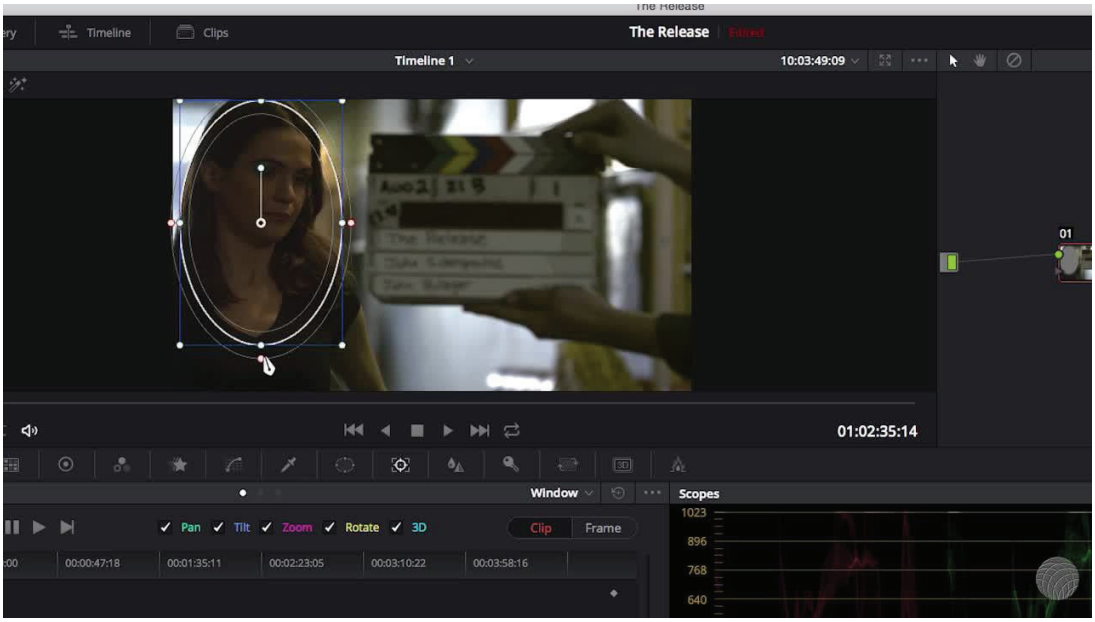
After delving a little deeper into color theory we take everything learned from this section and the previous one and apply it to the process of principle color correction. We look at the three step approach of adjusting blacks, whites, and mids to create first a neutral grade, then a stylized one.

Exercise: We strongly recommend taking the students through the Resolve for Color Correction Survival Guide at this point. Once complete, have the students take two or three different shots from raw state, to neutral grade, to a stylized grade of their choosing. Make sure they use the parade scopes to identify and neutralize the black point and then white point. editstock.com's *Gnarly inPink* and *Anesthesia* are good choices for this. You'll need to make sure you use high-quality ProRes versions of the files for good results.

Secondary color correction RT:~13min

Once primary color correction is complete, secondary color correction is applied to fine-tune the color of specific objects in the scene. A large part of this is getting skin-tones to look appropriate–not too yellow, too green, or too red (unless that's the intentional effect). In this set of videos we take a look at using mattes and keys to isolate portions of an image for color correction and the use of a vectorscope to correctly orient the skin tones.

Exercise: Have students work in DaVinci Resolve (a free download from blackmagicdesign.com) to perform secondary color correction of skin tone on a clip of your choice.



Introduction to color science with Peter Postma RT:~47min

OK, so this is a bit of a departure from the normal tight, concise format of coffee break film school. However, Peter Postma of the FilmLight group does such a comprehensive job of introducing color theory that we felt it was essential to include as part of the curriculum. At some point we plan to distill this into two or more coffee break-sized video series; until then you'll need to manage your student's attention span with this epic and densely-packed hour of color wisdom. NB: The

official runtime of the video is 1 hour, 12 minutes, but the core part of the video ends at the 50 minute marked, followed by Q & A.

Exercise: Given the length of the video, it's probably best to limit the exercise in this section to light discussion of what was covered and any confusion that may need to be cleared up by further research.

Unit 7 - Visual Effects

Shooting visual effects RT:~22min

Perhaps the most important visual effects technique students can learn is how to shoot footage in a way that's VFX friendly. Having the correct source footage can literally save hundreds of thousands of dollars in postproduction on a large feature.

This set of videos outlines color preparation and set survey techniques, specifically geared towards 3D camera tracking in post-production.

Note: a later course, "Adding CG elements to a scene," goes into additional detail with respect to shooting in anticipation of adding rendered CG elements to the shot. You

may want to include the “Principle Photography” portion of that video series as an additional component here.

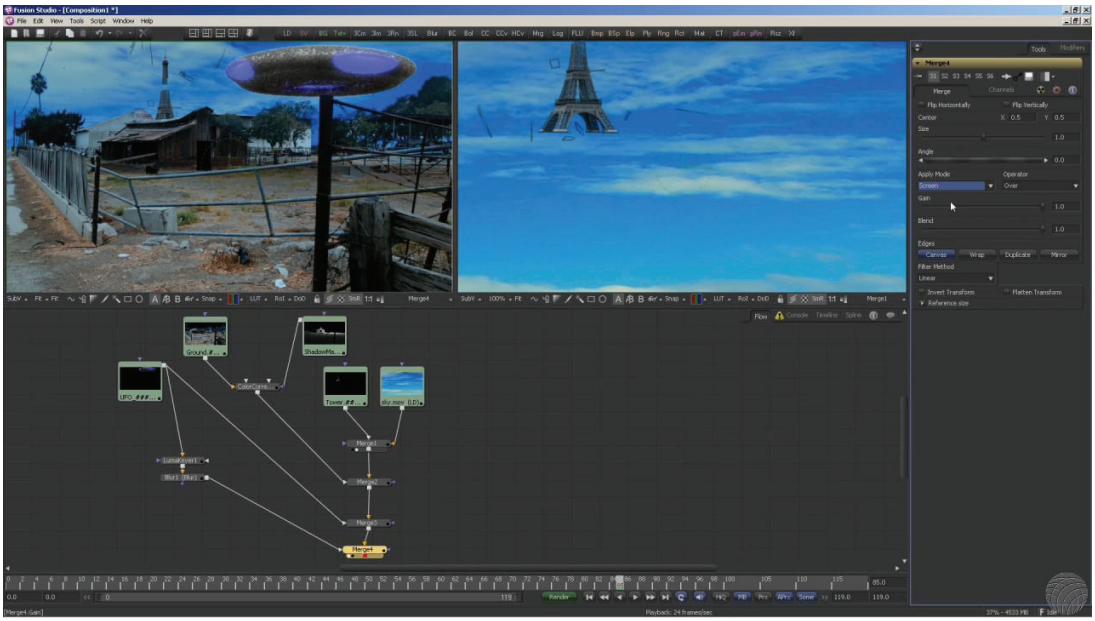
Exercise: Following the basic steps in the last videos, you can film a simple moving camera video shot (even with a smartphone) of say, the landscape outside the classroom, or even the classroom itself. Then import into After Effects and perform a camera track. Don’t worry too much about removing lens distortion or rolling shutter. If you keep the move relatively smooth and slow a basic track should be readily achievable. Keep the clip length short. Create a floating text effect for a quick “wow-factor” with the class.

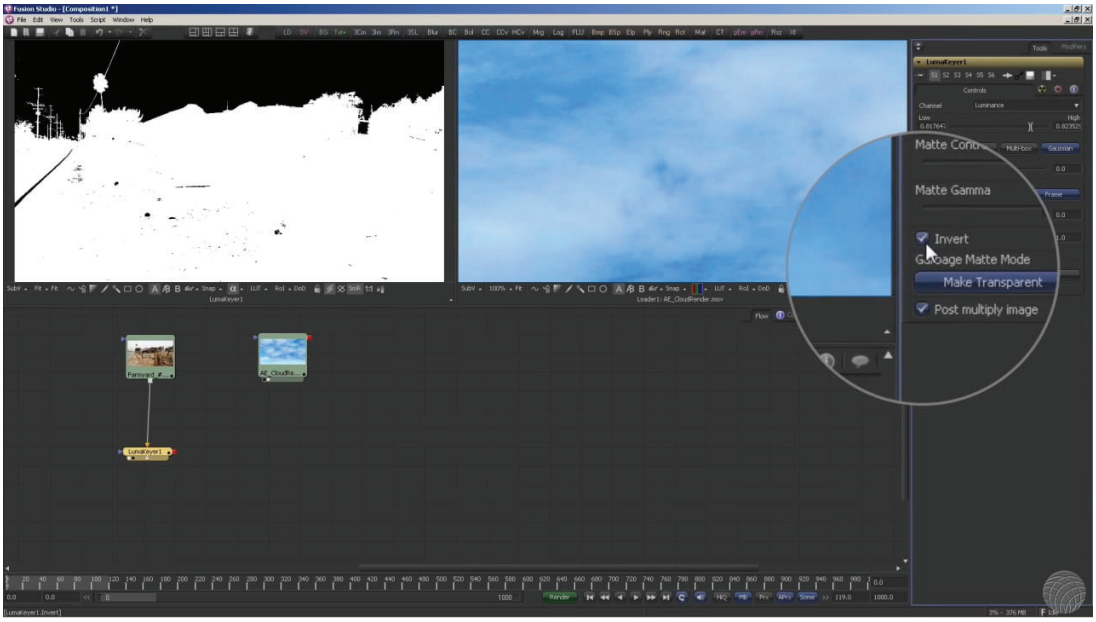
Note: watch the supplemental video, “Adding CG to your Next Movie” for a quick overview of the process ahead of the class.

Introduction to node-based compositing RT:~12min

Node-based compositing can be one of the most confusing aspects of digital effects and yet more and more applications are using the node paradigm for significant portions of their functionality. In this gentle introduction we explain the fundamentals of nodes in a way which should help clear up the confusion for students.

Exercise: We recommend combining this video with the Fusion survival guide. Fusion is a *free* full-featured node-based visual effects tool and the survival guide should provide enough context for students to begin experimenting with nodes and the visual effects they can help create.





Sky replacement RT:~14min

Sky replacement is a great introduction to visual effects shots. It's reasonably simple but still leverages 3d camera tracking, basic compositing, and color correction. Most student film cameras have a limited dynamic range and sky detail is invariably a casualty, so learning how to replace a blown out sky is both a practical tool and a great doorway into general visual effects workflow.

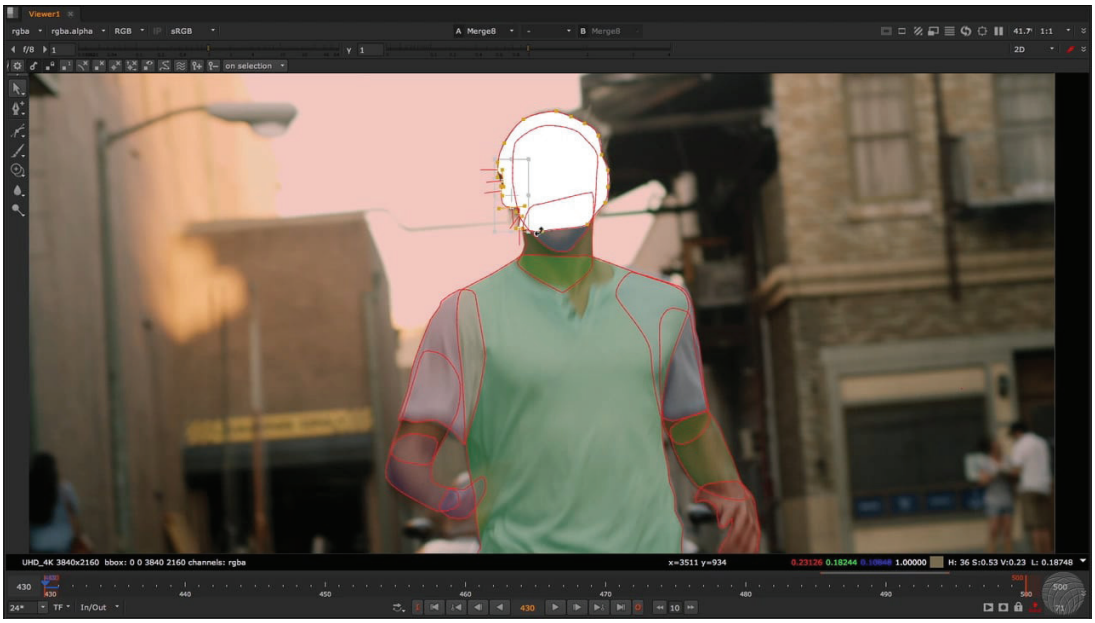
Exercise: The videos in this section are already very much geared to a step-by-step approach and so the best class exercise would be to reproduce those steps with student footage. If tracking in After Effects and compositing in Fusion (as described in the videos), just make sure you render the final animated sky in After Effects at the exact same pixel width and height as the source footage (the footage with the sky you're looking to replace). The editstock.com *J-Pops* footage is well suited for this exercise.

Tracking RT:~26min

Tracking is at the core of most visual effects shots, be it 3D camera tracking, or perspective tracking. This series of videos looks at the principles behind tracking, the various kinds of tracking (point tracking, planar tracking, 3D tracking), and the secrets to getting a good track even in "unfavorable conditions."

Exercise: This is a great opportunity for students to try their hand at matchmoving. Have students capture video of a

billboard, the side of a bus, a smart phone or tablet, or some other rigid surface, then track the surface and apply their own personal graphic as a matchmoved element. As a bonus, see if they can use the principles learned in the color correction videos to match the color of the introduced element to the background video.



Rotoscoping RT:~15min

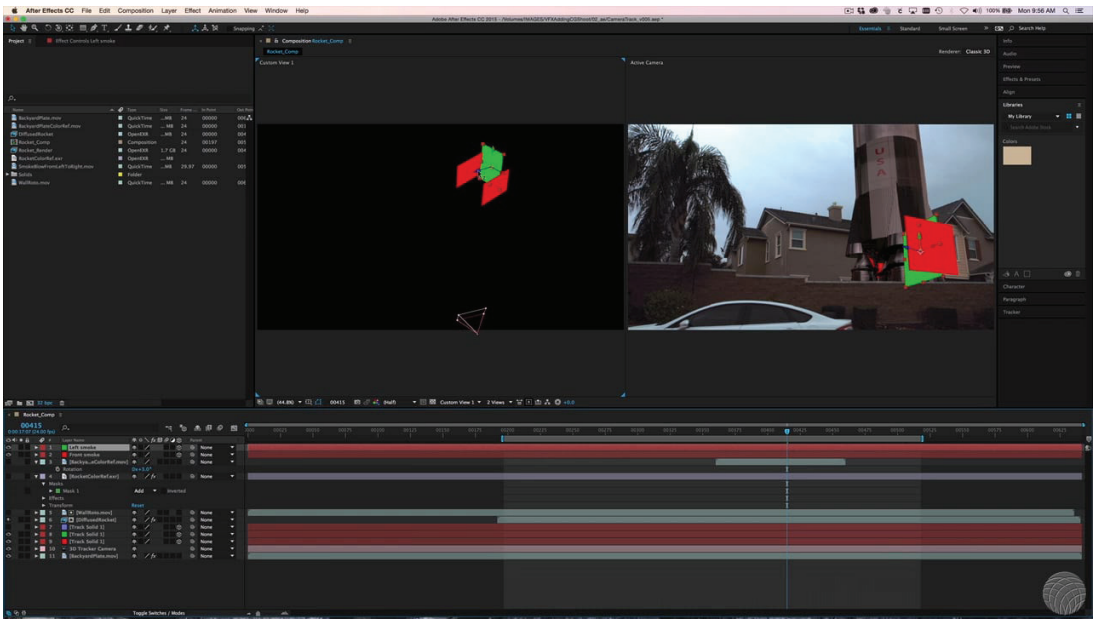
Even with all the technological wizardry available to modern visual effects artists, at the end of the day a lot of the work comes down to manually drawing shapes around objects that need to be isolated. This process–known as rotoscoping, or "roto" for short–isn't necessary complex, but a misunderstanding of the methodology can be disastrous. In this set of vides we look at the curve types available for roto, the challenges of dealing with soft edges, breaking roto down into manageable pieces, and the three fundamental rotoscoping strategies: divide and conquer, even frame jumping, and points of inertia.

Exercise: Have students rotoscope (in Blackmagic Fusion or After Effects) a single actor in a shot (preferably bald or without flyaway hair) and use the matte to create a "Pleasantville"-style effect, where the actor remains in color, but everything else is desaturated to black and white. editstock.com *Whisper Fan* footage is good for this.

Adding CG to live action

Of all the videos, this is probably the most technically complex. Nonetheless, it's delivered in a style that should prove helpful as an overview for students looking to direct visual effects, even if they don't create the effects content personally. For students with more of a leaning toward the technical or artistic, this should additionally serve as a step-through process which can be repeated for their personal projects.

Exercise: To re-iterate: this is for students who take an interest in going deeper in visual effects; students with a casual interest will find themselves frustrated trying to get to a satisfying level of completion. Watch the Going Further video, "Adding CG to your next movie", for reinforcement of the basic techniques, then have students choose a simple model like a statue to integrate into their scene.



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Kind regards,

The moviola.com team