To take full advantage of this course participants will need to have activated their free Lynda.com account to go through a few recommended video training and tutorials.

Lynda.com is an on-line training library featuring a wide range of tutorials dedicated to specific skills, subject areas and software. UW-Superior students and staff have access to lynda.com, a continually growing and evolving library of training videos and tutorials covering a wide range of software, technologies and business topics. Students and staff members can take advantage of free 24/7 access to the entire library of training.

Lynda.com Account Set-Up

UW-Superior account holders originally received an email about setting up their Lynda.com profile. If you did not complete the set-up, you can still get an account by contacting the Technology Services Help Desk to get more information on this service visit the Technology Services page about lynda.com. Additional reference materials and on-line training links are provided in the accompanying Digital Video Resource Guide to support the learning activities in this course.

Computer Technology and Software Application Information

On the UW-Superior campus resources for multimedia production vary a little for what is available for students and faculty/instructional staff. Technology Services maintains a technology equipment loan service with video production equipment available for short term check out. More information is available at this link - Student Technology Guide.
**Google Image Search Tips**

Many people use Google as a search tool on the web and it is a great search engine with some useful search tools that can help you find Public Domain photo and video content that can be used in your projects without concerns on violating intellectual property laws. Two very useful Google search tools are the “Size” and “Usage rights” tools, which are accessed by clicking on the tools button on the button bar.

The “Usage rights” button drops down a list shown in the photo to the right; offers selections that will narrow down the search results based on your selection. Selecting “Labeled for reuse” gives you the most restricted search result only showing content that would likely be in the public domain.

The “Size tool” is useful when you are looking for high quality photos to use in either printing projects or video when the size and resolution quality is important. In general practice select the “larger than...” button, then from that listing the option for images larger than 2 MP (1600x1200) pixels. Images of this size or larger will provide you with an image of useful quality.

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**About Fair Use: Media Production and Respecting Intellectual Property Rights**

There are intellectual property laws in the United States and globally that cover copyrights, patents, trademarks, and trade secrets. These laws are set up to protect the rights of an individuals regarding their original creative work, authorship. Of these laws copyright laws are more of a concern in media production than the others. Taking music, video, photography, or artwork of others without their permission and using it in your work can violate these laws and may be considered unethical use and plagiarism.

Fair Use is the idea that under specific conditions there are exceptions to the exclusive rights granted by intellectual property law to the author of a creative work. Although some view Fair Use as loosely defined and there are many misconceptions, it is a recognized doctrine in United States copyright law that allows limited use of copyrighted material without acquiring permission from the rights holder.

**Examples of fair use include:**
- commentary, criticism, news reporting, research, teaching, library archiving and scholarship
- provides for the legal, non-licensed citation or incorporation of copyrighted material in another author's work under a four-factor balancing test listed below

**4 Factor Test**
1. The purpose and character of the use, including whether such use is of commercial nature or is for nonprofit educational purposes.
2. The nature of the copyrighted work.
3. The amount and substantially of the portion used in relation to the copyrighted work as a whole.
4. The effect of the use upon the potential market for, or value of, the copyrighted work.

These simplified guidelines on the 4 Factor Test for Fair Use are taken directly from the United States Copyright Office website, their website provides more detailed explanations for each of these 4 factors.

Website link on Fair Use - [https://www.copyright.gov/fair-use/more-info.html](https://www.copyright.gov/fair-use/more-info.html)

**Additional resources on Fair Use:**
- U.S. Copyright Law [Main Page] - [https://www.copyright.gov/](https://www.copyright.gov/)
- U.S. Copyright -Title 17 of the U.S. Code - [https://copyright.gov/title17/92chap1.html](https://copyright.gov/title17/92chap1.html)

**Legal Issues Surrounding Music Sampling**

Wikipedia Article - [https://en.wikipedia.org/wiki/Legal_issues_surrounding_music_sampling](https://en.wikipedia.org/wiki/Legal_issues_surrounding_music_sampling)

**Public Domain and Royalty Free Content**

If you have a need for additional content to used in your media production project, the Internet offers a vast collection of photos, art, illustrations, video and even music that are part of the public domain or royalty free content.

Much of this content can be used without concern about violating intellectual property laws. Proper citation and giving acknowledgment on original work created by others is one way to help assure that you aren't in violation of intellectual property laws and are using the material under fair use.

The listing below includes just a few places that offer public domain as well as other usable content:
- Internet Archive - [www.archive.org](http://www.archive.org)
- WikiMedia Commons - [https://commons.wikimedia.org/wiki/Main_Page](https://commons.wikimedia.org/wiki/Main_Page)
- Library of Congress - [https://www.loc.gov](https://www.loc.gov)
- Smithsonian Institution Photo Collection on Flickr - [https://www.flickr.com/people smithsonian/](https://www.flickr.com/people smithsonian/)
- British Library Photo Collection on Flickr - [https://www.flickr.com/photos/britishlibrary/](https://www.flickr.com/photos/britishlibrary/)
- Link to “The Commons” on Flickr with Guideline links on usage - [https://www.flickr.com/commons/usage/](https://www.flickr.com/commons/usage/)
UNIT I - Introduction (Steps 1, 2 and 3)

About this UNIT - Not all video productions require a completed script to start the production process or even to produce a complete video. In this mini-course we go through the script develop process for an informational video and the example materials provided support this process using the production of a food safety video as an example.

Planning and script development in video production is often referred to as "Preproduction" a broad term which can include all the tasks required to complete before you start recording video. The steps outlined in this course are not all-inclusive but should help even the first-time video producer get through this process successfully. Additional reference materials and on-line training links can be found in the Digital Video Resource Guide that accompanies this course.

Step 1 - Project Assessment

A. Needs, Strategy & Objectives Worksheet
B. Write an objectives statement
C. Video Lesson Step 1 - Using the Needs, Strategy and Objectives Worksheet to do your project assessment and set your objectives.

Step One: Project Assessment

The Needs, Strategy and Objectives worksheet is a useful tool when you are developing most and type of communication project. The worksheet is a series of questions, similar to the traditional 5 "W"s and the "H"; Who?, What?, Where? When? Why? and How?. The end result of using the worksheet is gaining a better of who your audience is and how best to communicate your information to them. The final step on the worksheet is the writing of an objectives statement for your project.

The objectives is the last step in the Needs, Strategy and Objectives worksheet, the task of writing a clear concise objective statement is very important and the whole purpose for working through the questions above. The objectives statement serves as a guide when developing your production outline, script and of your whole video project, it is worth the effort to develop a good one that focuses on your audience and your needs.

For Unit I Step 1; there are 2 documents available to supplement the content for this course. One document is a guide on how to use the Needs, Strategy and Objectives Worksheet and the other is a blank copy of the Needs, Strategy and Objectives Worksheet form.

Completing and working through Needs, Strategy and Objectives Worksheet helps prepare you for Step 2 Unit I.

Sample - OBJECTIVES Statement: (Video topic/scenario – Public Service Announcement on food safety, an informational and educational video to change behavior related to food safety and help prevent food poisoning)

Objective Statement: The purpose of this video is to… using CDC facts on food borne illness and deaths in the United States, the video will raise awareness of the importance of following food safety methods when handling and preparing foods. The video will focus on the 4 handling behaviors; Separate, Clean, Cook and Chill. Demonstrating practical steps to help change behaviors related to food safety and will direct viewers to additional resources that can help them learn more and protect themselves and their families.

Video Lesson Step 1 - Project Assessment

This lesson covers the use of the Needs, Strategy and Objectives Worksheet to do your project assessment and set your objectives. Hosted on our YouTube Channel this video runs for 4 minutes and 43 seconds - https://youtu.be/n2ImQhcu2QY
Step 2 - Video Project Outline

A. Story development approach - write a script or interview subject matter experts
B. Develop an Outline - Introduction, Body and Conclusion
C. Video Lesson Step 2 - Developing a video project outline

2A  ➔  Story Development

This step is the development of a Video Project Outline, creating the framework for telling your story or crafting the message for your audience. For the purpose of this course we will cover two approaches on how to develop an outline to tell your story; using a written script and conducting an interview(s), in either case developing an outline can be of great benefit. Here are a few pros and cons for each approach:

1. Using a Script - writing a full script for your video can be a bit intimidating, however the benefits oftentimes will make the effort worthwhile.
   
   **Pros**
   - Better for delivering a controlled concise message that can be tailored to your audience
   - Typically easier to edit
   - A well developed script is also helpful for planning your video shoot, B-Roll shots, titling and graphics needs.
   
   **Cons**
   - Can be difficult to accomplish if you have never written a script before
   - May require more time and research to assure that you have correct information
   - Will require someone that can provide great on-camera presence and/or narration skills to deliver the message clearly and credibly.

2. Interviews - conducting interviews and developing your story from first person testimonials or subject matter experts may limit the need for a full script and can be a great approach to creating the story. To do this successfully you may still need to write the introduction and conclusion parts of a script to frame the story. This will also require you to develop effective interview questions.
   
   **Pros**
   - Using first person testimonials and/or subject matter experts can lend credibility to your story
   - Can often times shorten the production time
   - Can relay information on a more human level, evoking emotions
   
   **Cons**
   - Less control over the message, question responses can be unpredictable
   - Requires good skills in developing great questions and conducting interviews
   - May require thorough research on your part, a good understanding of the topic area or subject matter is helpful in developing interview questions and when editing.

2B  ➔  Video Project Outline

In this approach towards the development of a Video Project Outline, the basic outline has three parts; the introduction, the body and the conclusion. Remember use your “Objectives Statement” as a guide or filter as to what content is important and needs to be in your video and what can be left out.

- The Introduction – introduce the video topic and tell the audience what you are about to say, what they are going to hear about.
- The Body – deliver the story; break it up into logical pieces, tell them succinctly stay focused on your objectives, keep the message clear and to the point.
- The Conclusion – Tell them what you told them, review and re-enforce the key points to your message, deliver a call action if there is one, then close.

The more details that you can put into your outline the easier it will be to develop your script and plan your video shoot. Following is a link to an example Video Project Outline, the example uses the Objectives Statement from “Food Safety” scenario given in step 1 of this unit. Blank Video Project Outline Worksheet

2C  ➔  Video Lesson Step 2 - Video Project Outline

This lesson provides guidance on using the provided Video Project Outlining Worksheet for developing an outline for your video identifying the structure of your story. Hosted on our YouTube Channel this video runs 3 minutes 36 seconds. https://youtu.be/7_ZIU9edHYQ
Step 3 - Writing a Video Script

A. Working from your outline
B. "How" will you tell the story
C. Videos Lessons Step 3 - Script Writing Basics

Writing a video script for the first time can seem like a daunting task, every video may require a different “approach” based on the purpose of the video, delivery style and format of the production. Key points to remember about developing your script include:

- Start with a clear set of objectives [Step 1 of this Unit]
- Create an outline that will help you identify the elements of your story [Step 2 of this Unit]
- Decide on “how” you will tell the story the approach and delivery style
- Do the research needed to tell a creditable story

One more important thing about video scripts, they are more than just the words to be spoken, done right they are like a road map that can guide you through the production. Scripts can also come in a few different formats, Using a simple two column, tables format can help you stay organized and keep your production on track.

At this stage of production in Step 3, you should be ready to decide on the “how” you will tell the story and write your script. Since this is a mini-course on digital video production we will not take the time to cover all the possible ways or the “approach and delivery styles” that can be used to produce a video. The focus instead will be on telling the story and how to create the narrative. In simplest form the script is the narrative of the story being told, and it can be written out in many ways such and a screenplay style full dialog script with interaction between 2 or more people or a straight-narrated script the “Talking Head” news story style.

Tips and key points to remember about developing your script:
- Start with a clear set of objectives [Step 1 of this Unit]
- Create an outline that will help you identify the elements of your story [Step 2 of this Unit]
- Decide on “how” you will tell the story
- The script in not meant to limit what is to be spoken but a plan as well
- Do the research needed to tell a creditable story
- Cover the subject matter content using simple language
- Write in a more active voice not a passive voice
- Think about any lists or main concepts that may need reinforcement
- Read your script aloud, listen to how it sounds, be sure you sound like you are talking not reading
- Keep it simple, unless you have a lot of time and resources

Script Writing Resources

Script Template examples - Very simple, tables based script templates. the first column (left) gives you a place to shot, scene and visual notations, direction, and anything else that can be supportive to the stories narrative in the second (right) column the link below

Tables Based Script Template Examples
Column Script Template (MS Word Format)

Sample Script - below is a link to an example script, the example continues the use of the “Food Safety” scenario, working off the Video Project Outline example provided in step 2 of this unit.

Food Safety Sample Script

Additional reference materials and on-line training links can be found in the Digital Video Resource Guide that accompanies this course.

Video Lesson Step 3 - Writing a Video Script

The 2 videos in this lessons cover some script writing basics using the script writing resources provided above for an informational style video. Hosted on our YouTube Channel the Part 1 video runs 5 minutes 45 seconds - https://youtu.be/aHJxsalEbl and the Part 2 video runs 7 minutes 15 seconds - https://youtu.be/AqeyshvoA9Y

Working Without a Script: Interview/News Style Information Videos

Depending on your video project needs, often times you can get a project done without using a script or possibly only writing an opening and closing statement to frame the story and use a “subject matter expert” to provide the narrative to tell the story; this type of production is common in news reporting. When you need a story told go get first-hand information from the source, go ask the expert. To get the best story using this approach required that you develop great interview questions.

As with writing a script and maybe even more so with writing interview questions, doing the research on the topic to be covered in the story is very important. You need to know enough about the story topic to develop questions that will meet your video project objectives, without the right questions you may not get the information bits to build a story. Questions that can be answered with a yes or no are useless without hearing the question.

Telling a story through the voice of a subject matter expert is an effective way to create a video to inform or educate and there are great resources on the Internet to guide you through the process of conducting great interviews. Check out the Digital Video Resource Guide that accompanies this course for more information.

Get your story from the source, interview a subject matter expert and let them provide credible first-hand knowledge.
UNIT II - Introduction

In this mini-course, steps 4-6 cover the production or shooting portion of the project. If you have successfully completed steps 1-3 and have a script ready to go, the production will go much easier. The Unit is divided into three parts covering the basic steps through the production phase including: preparing for the shoot, scouting the location, shooting tips and links to additional resources.

NOTE - Media Storage

Media storage can often times become a challenge; video files are large and take up a lot of space on hard-drives and portable media storage devices. Plan to have a place to back-up your original files, and use copies of those files until you have completed your project edit. A completed 5 minute video may take up as much as 500MB of media storage space, the video shots needed to edit that same 5 minute video can take up many times more media storage space. A short video project may require 8-10 GB of media space to work through the editing process.

Step 4 - Preparing for your Shoot

A. Camera guidelines and selection considerations
B. Video Lesson Step 4 - Selecting production equipment and getting prepared for your video shoot

4A ➡ Camera Choice Guidelines and Selection Considerations

With the technology available today there are many options available when it comes to video recording they include; High Definition Digital Camcorders, DSLR Cameras, Digital Point and Shoot Cameras, Tablets, Cellphones and Computers with Webcams. The question may be which video recording device is best for your project?

Some fundamental guidelines for selecting a video recording device would be to:

- Use the best video recording device available to you that is able to meet a High Definition 1280x720 pixels standard
- Select a video recording device that can produce both good quality video and audio
- Be sure that the video file format the video recording device records to will be compatible with your editing application (avoid video recording devices that produce proprietary file formats needing file conversion)
- If possible select a device that allows the use of an external microphone to improve the audio quality

Understanding the capabilities and weaknesses of the video recording device you select will go a long way towards a successful production and may help you avoid problems and frustrations.

Camera Basics - Take some time to learn about the video camera that you will be using, even read the manual on these key functions of the camera:

- Basic camera set-up, Zoom/Focus Setting (Auto or Manual)
- Understand how to set the White Balance if the camera allows manual setting
- Learn about the camera's audio recording and volume control
- Check your power supply options, charge up the battery ahead of time
- Be sure you have enough media storage (memory card space) to record the project onto

Don't under estimate what your digital camera can do versus a tablet or cellphone, many moderately priced digital photo cameras can shoot real good video and often-times have much better optics and built in microphones compared to cellphones.

4B ➡ Video Lesson Step 4 - Preparing for your Shoot

This lesson covers the things you need to think about while selecting production equipment and getting prepared for your video shoot. Hosted on our YouTube Channel this video runs 9 minutes 11 seconds in length - https://youtu.be/fSnBlA-K11k
5A ➔ Avoid Areas With a Lot of Noise
Ambient sound (background noise) is all the background sounds within a given location. Our brains process sound in a way that background noises are filtered out (turned down) to allow us to focus on the sounds we want to hear like a voice. Microphones cannot filter out noise so selecting a quiet location with very little background noise is important, here a few background sounds to avoid:
- Running fans, heating systems, refrigerators, A/C units
- Hallway sounds, printers or copiers in adjoining rooms
- Outside noises, trains, traffic, construction, garbage truck sounds
- Near by equipment sounds, computer or projector fans
- Music playing or people talking near by

5B ➔ Scouting Your Location
Location and set-up - Scout out your location so you know what to expect when it comes to lighting conditions and ambient noise, here is what to look for:
- A plain uncluttered background void of distractions
- Good natural lighting or a well-lit area with defused indirect light (areas with low shadowing)
- Again pay attention to background sounds like fans, heating systems, outside traffic, refrigerators, hallway sounds and more. Your ears normally filter these sounds out but the camera can't.
- If you can bring the camcorder that you plan to use, record someone talking to the camera in the room to hear the sound quality (avoid smaller rooms that create echo effects)
- Check that there is there electricity close to where you want to shoot, are extension cords needed?
- Consider if you can re-set or reposition your set-up within your location site to accommodate multiple scenes, interview location and changes in lighting with sun movement.
- Consider using floor lamps, large indoor plants and other furniture pieces to frame your set area or breakup overly open stark backgrounds.
- Shooting locations that will support the topic of the story are also a good option when it can be done, especially if you can also acquire B-Roll shots during the same shoot.

5C ➔ Video Lesson Step 5 - Location and Talent
This lesson covers the things you need to think about while preparing to shoot video as a selected location and working with subject matter experts or talent. [Hosted on our YouTube Channel this video runs 8 minutes 26 seconds - https://youtu.be/1Q3bS_zQaSA]
Step 6 - The Shoot
A. Be on Location Early
B. Equipment Check
C. Tips, Tricks and Avoiding the Deadly Camcorder Sins
D. Video Lesson Step 6 - The Shoot

6A ➡ Be On Location Early

Time can always be a great asset when doing video production, arrive on location early making sure you have ample time to set-up and test all your production equipment. If you are fortunate to have on-camera talent, subject matter experts or people to interview be respectful of their time and be ready to start when they arrive. Get them positioned into the shot location, engage them in a conversation to help them relax, do a brief review on the purpose of the video, the script/interview questions/shot plan and do a quick sound check.

Each video project and shooting situation is different and will have different requirements, you may need to shoot at multiple locations and do a lot of supportive B-Roll or overlay video to complete your project. Below are just a few basic tips and guidelines to help you through the process. Please review and take advantage of the additional resources that are listed in the Digital Video Resource Guide for more great on-line trainings and tutorials.

At the shoot:
• Plan your shoot, use your script as a guide and even create a shots list if needed.
• Make sure you bring all the equipment you need, and equipment using batteries that the batteries have a full charge.
• Use a tripod and get the camera as close to the set as you can with the camera zoom set to wide, frame up your widest shot, then check out your zoom in range.
• If recording audio with the build-in camera microphone you want the as camera close as possible for better audio.
• Plan on shoot taking longer then you expect, because it will take as long as what is needed until you are done.
• Keep the set quiet while recording to avoid unwanted noise in your audio.
• It will generally go smoother if the person operating the camera also gives the directions during the session.
• Do a practice recording and play it back to make sure the camera is working properly and you are getting audio.
• Always make sure the camera recording is turned “ON” or “OFF” when intended, especially when you are recording.
• Shoot with editing in mind. Don’t expect to run through the script in one take, shoot in segments with multiple takes.
• If you find it difficult to work through a script segment or question you can always work ahead and come back to redo that segment after doing a different segment(question) or several segments(questions).
• When doing interviews and when appropriate, at the end of the session ask for a summery review of the key points covered during the interview. Very often you are able to get more concise impassioned statements.

6B ➡ Equipment Check

• The guideline on production equipment is to check out all your equipment the day before your scheduled shoot.
• Never assume that the batteries are fully charged if you are planning on using anything with batteries like; cameras, microphones or even camera lights.
• Test out the operation of the video recorder, make yourself familiar with the basic features and functions of the recording device and make sure you have media storage in the camera and you can record to it.
• Layout your set-up including cables, power cords, adapters, connectors and tripod, making sure you have everything you will be needing on location ready to bring along with you.
• Don't leave anything behind when you pack up to go to the shoot, missing a key piece of equipment may keep you from doing the recording when planned.

There is no shame in making up an equipment list to help you keep track of what you will be needing on location and to check the items off that list as you are loading them up to go to the shoot location.

Media Storage:
• Make sure your recording media cards are the right type(class) and ready to go. Whether you are recording to a media card(s) or internal camera memory, be sure you have checked that you have free memory storage available for your project.
• If there photos or video already on the card or internal camera memory plan to move or backed up the files to another storage device.
• Backing up files on different storage is especially important if you need to reformat the media storage to allow it to work with your video recording device.
• Matching media card speed class rating with your recording device is worth paying attention to when selecting your memory cards.

NOTE: Some devices require specific minimum sustained writing speed to the card to record the video stream. For example a Class 4 card would not work well for a camera requiring a Class 8 or higher card. To learn more - https://www.bhphotovideo.com/explora/computers/tips-and-solutions/numbers-your-memory-card
Tips, Tricks and Avoiding the Deadly Camcorder Sins

Listed below are a selection of some of the best tips, tricks and things to avoid while doing your video shoot.

The Seven Deadly Camcorder Sins:

Don’t:
- Headhunting - placing every subject in the center of your frame.
- Motor-zooming - overuse of on-screen zooms.
- Rooting - staying in one spot instead of looking for interesting angles.
- Fire-hosing - panning all over the scene.
- Upstanding - shooting everything from standing eye-level.
- Snap-shooting - recording only two or three seconds per shot.

Do:
- Count to 5, after you push the recording button before you have the narrator start talking or you ask a question.

Twelve Helpful Tips for Shooting Great Video:

- Use manual focus if your camcorder has it.
- Set white balance at every location.
- When shooting outdoors, keep the sun behind you.
- Plan your shoot.
- Use a tripod or other image stabilization device.
- For hand-held stability, imagine that your camcorder is a very full cup of hot coffee.
- Use the zoom to compose your shot. Avoid zooming while recording.
- Move the camcorder only when necessary.
- Shoot to edit, change up your shots - wide, medium and close.
- When project calls for B-Roll, keep your average shot lengths no less than 5 seconds holding shots for 20 seconds or more and shoot a few extra shots at different angles.
- Keep the shot steady (no zoom or pan) for at least 10 seconds.
- While shooting, be as inconspicuous as possible to best capture the true behavior of your subject.

Helpful Tips for Recording Audio with the on camera microphone:

- Get the microphone close to the talent.
- Listen through headphones while you shoot.
- Keep audio in mind when picking your shooting location, your ears filter out sounds like fans, traffic driving by or hallway noise - microphones don’t.
- Be careful when handling or touching the camera (and tripod) while recording so you don’t transfer sounds through the camera body or jolt the camera position.

Video Lesson Step 6 - The Shoot

This lesson covers helpful recommendations and useful tips on having a successful video shoot using basic video equipment.

Hosted on our YouTube Channel this video runs 7 minutes 43 seconds - https://youtu.be/MPFEKyF8eGU

When setting up for your shoot think how the background will look and consider setting up where you can easily change your shot direction.

Use the best microphone available to you, get the microphone as close to the person talking as you can for better audio recording.

If the camera you are using is headphones plug-in capable monitor the sound you are recording through headphones.

When you are able to shoot with manual zoom/focus settings, zoom in and focus on the face of your on-screen narrator then zoom out to a framed shot with the person slightly off center on your screen. This is more interesting than a right in the center shot.

When you want to record, push the record button, look at your monitor screen, confirm the recording has started, then wait a few seconds before you have the on-camera talent start speaking or before you ask your interview questions.

Before you wrap-up your shooting session make sure you have files recorded to your media card, they play back and that there is audio recorded with the video.

If you plan to add names and titles to the lower third of your framed shot, allow some room for it when doing your shooting. Basically don’t zoom in to close for shots that would have text in them. You don’t want the text to cover parts of the face.

Shoot with editing in mind always record a little bit before you have the narrator start talking or you ask a question and wait a little after they end before stopping the recording to allow for a little extra video for trimming and transitions.

When you shoot B-Roll or overlay shots try shooting from different angles to get more interesting shots other than straight-on at eye-level.
UNIT III - Post Production

UNIT III - Introduction

The edit process is where you bring all the production pieces together and tell the story. As editor you are the first critic and you have the responsibility to keep the continuity of the message on track and develop a story that meets the objectives. A common approach to digital video editing is to divide the process into 4 stages; the rough edit, refinement (fine tuning the story), final edit (sweetening) and output.

If you have followed the steps in UNIT I & UNIT II, worked from your script to shoot the pieces of your video, then the editing process will be like following a recipe. Your outline is the recipe and your video clips, text and graphics are the ingredients; editing is when you combine the ingredients to get a finished product. Mostly you are just removing the mistakes and unneeded pieces.

In digital video production, the use of a non-linear video editing software application offers a lot of flexibility in putting together the video clips. They don't always have to go in the order they were shot and pieces that may distract from the continuity of the message can be cut out to deliver a concise story.

Media Storage and Project Management

Before You Start Editing - Media storage can very often become your first big challenge, video files are large and take time to copy and move from media cards to computers. A completed 5 minute video may take up as much as 500MB of media storage space, the video shots needed to edit that same 5 minute video can take up many times more media storage space. The whole project may require 8-10 GB of media space through the edit process.

My recommendation is that you keep two copies of your original video shots stored on separate media storage devices (computer hard-drive, thumb drive, SD media card) one set for back-up and the other set as working copies for your edit. If it is usually better to store your working copies either on the hard-drive of the computer that you are using while editing or an external hard drive if you have one available, connected to the editing computer.

If you are working on a computer lab computer and cannot save the project to the computers hard drive, using an external hard-drive would be the top choice, but a 16GB or larger thumb drive would be a good choice. A SD Media Card will also work but may not transfer file data well when editing video unless it is a high speed card. Again I recommend you have your original video clips backed-up (stored) somewhere other than where the files that you are using to edit with are stored, if somehow you lose or corrupt the original files you will need to start over are re-record the shoot.

Once you have media storage plan in place, it is time to gather your other resources together; image files, video clips and other supportive files to a single media storage device (Hard-Drive, Thumb-Drive or Memory Card), then back them up, have your project stored on two devices; save and backup your work often.

Selecting an Editing Application

There are many digital video-editing applications available out on the market. If you have access to and experience with a video editing application not identified in this course, use what works best for you. As a member of the UW-Superior community (students, faculty and instructional staff) you have access to a few editing software application on campus, Adobe Premiere Elements, Adobe Premiere Pro CC and Windows Live Movie Maker.

Recent software updates in UW-Superior computer labs has given the campus community the availability of Adobe Creative Cloud in most labs and it is also available to faculty and staff for a nominal annual fee. Adobe Creative Cloud includes several applications useful in video production especially Adobe Premiere Pro.

If you plan to do more than a few video productions in the future I recommend that you invest some time to learn Adobe Premiere Pro as your editing tool. If you are interested in learning more on using Premiere Pro I suggest you go through Chapter 2 - The Fast Track: A Quick Start-to-Finish Guide to Premiere Pro in the Premiere Pro CC Essential Training (2015) on Lynda.com.

7A ➡ Getting Started on the Edit

For most every video editing application to get started you create a new blank project by starting the application opening a new project file. Once the project file is open, importing the video clips into the project makes your video clips available in the project file. An important concept to understand is that typically importing the video clips into the project DOES NOT copy the files into the project, the files are essentially being referenced in the program and cutting and trimming the clips does not change the original files.

Editing Tips:
The edit structure should be much like your video outline developed in UNIT I; introduction, body and conclusion. When editing, be tough and stay true to the objectives, sculpt the story. Like a sculptor you build the stories image by taking away the unneeded pieces and the parts you leave in the edit should make the story stronger, clearer and concise.

In Unit II you were introduced to the term B-Roll, as a resource used in editing to add visual elements that support the story and a way to cover over edit points. During the rough edit phase you don't need to focus on B-Roll at all, it is best to focus on the narrative and how the story is being told. Keep in mind that B-Roll is most any kind of visual element, not just video clips; it can be a simple graphic image like a PowerPoint slide with bulleted text on it, a digital photo or just text on a plain colored background.

When you do your rough edit, focus on the narrative of the story, B-Roll is added in the second phase in editing during refinement. Clever use of B-Roll can also be like little bandages or patches to cover your edit cuts, the flaws and glitches, each time you run into a tough edit point give some thought to what could be used to cover over the video portion.

Additional rough editing tips:
• During your rough edit, focus the editing on your “Audio” the narrative first and build your story.
• Don’t get too distracted by the video or worry so much about what’s happening on the video or how it looks.
• When you do a rough edit you are doing straight cuts (sometimes called jump cuts) edit cuts with no digital video transition effect applied.
• Remove the major audio glitches during the rough edit; noises, long pauses and things like that
• Remember editing is taking away the unneeded pieces to leave behind a story.
• Listen to the words of the narration, close your eyes during edit playback to hear what is being said.
• A rough edit should tell the complete story, and will set the length of the completed video.
• If you have a time limit on the video length, the rough edit is where you do your best to meet the time limit.

The goal for completing your rough edit is to have a complete continuous story with all the major errors, glitches and long pauses removed from the project. Don’t get over focused on the fine details during the rough edit phase, those refinements will addressed in the next two edit phases.

7B ➡ Assembling Your Story and Working on the Timeline

Once you have started your project file, imported video clips and the other pieces of media that will make up your story into your video editing application, you can begin to assemble the story on the timeline. Although you will find some differences between editing applications most all non-linear video editing software applications use some form of a timeline editing structure for assembling and editing your video clips into a sequential story.

The timeline editor very often has multiple tracks where you can place your video clips and their audio tracks synchronized together along with additional video tracks for B-Roll video, photos, graphics and text elements. The timeline will also have additional audio tracks for sounds, music and the audio portion of your B-Roll recorded video. How you make use of the extra tracks in the timeline is dependent on your project needs. During the rough edit step it is likely that you will not have any use for the extra audio and video tracks, at least not until you start the refining step.
Timeline Editor Basics

Non-linear digital video editing software applications in general feature a timeline based editor, most offer multi-track editing, however many of the free editors like Microsoft Movie Maker are limited to one video track. The basic concept of a timeline editor is it allows you to arrange the various elements of your video sequentially on the timeline in the order that you want them to appear in your story. Timeline editors with multi-tracks also allow you to overlay and composite layer visuals and sound within your story for more clarity and impact.

The common editing tools for video help accomplish key tasks like cutting and trimming your video clips, which allows you to remove errors, cut out repetitive or unneeded content and manage your audio. Regardless of the choice you make when selecting a video editing application most all editors offer many of the same editing tools and features. This quick guide has been developed to provide tips, guidance and instruction on developing an informational/educational video and since there are many choices for editing applications does not focus on one specific video editor. Which ever editing application you choose take some time and go through the applications basic tutorials or take advantage of the training resources available using your free Lynda.com account.

7C ➔ Video Lesson Step 7 - Rough Edit

This lesson covers a few tips and provides insights on the rough edit process and how to get the editing process started.

Hosted on our YouTube Channel this video runs 6 minutes 43 seconds - https://youtu.be/5TVli5RD3Wc
Step 8 - Refine the Edit

A. Refining the rough edit
B. B-Roll, transitions, and visual elements
C. Video Lesson Step 8 - Refining your rough edit by adding B-Roll and transitions

In the rough edit step you edited with a focus on the audio, the story narrative; now is the time to look at what is happening on the video, to see what edit points need to be covered over and where video transitions may be needed. For the most part, refining your edit means that you are adding your B-Roll or other supportive visual elements that support and strengthen the story adding clarity to the information presented.

Transition is a term used for two purposes in editing; in one sense the word refers to changes in the story’s theme or major topic, however when referencing video transitions the term describes a digital effect created by the editing software. The most common video transitions are; fades, cross dissolves and straight cuts (having no digital transition effect applied). The need to use video transitions is very often to cover-over and smooth out jumpy or jerky video, created at edit points, video transitions also can be used for dramatic effect.

Here are a few tips:

- Consider making a duplicate file of your rough edit as a back-up before adding B-Roll and transitions, most programs have a “save as” option to save a copy of the project to a new file name (or just duplicate and rename the file).
- If you can, cover over a group of multiple edit points with “B-Roll” or a visual element that supports the story, layering multiple elements (video, photos text or graphics) often called compositing covers edits and can focus on details.
- Don’t try to cover over use multiple video edit cuts using transitions cross dissolves.
- Consider using B-Roll without any audio narrative when you make topic transitions within the story. A graphic/text slide can serve as a visual foreshadowing, alerting viewers to a topic change.
- Pick one or two types of video transitions (fades or cross dissolves) and stick to those.
- Avoid complex flashy video transition effects, especially if the video is primarily for the web.
- Some video editing programs have many more digital transition effects, some are real flashy like: fire, page peel, flips etc., use these effects sparingly.
- Flashy video transitions can be useful if you need to create an impact; reserve them for opening and closing sequences or major theme/topic changes.

When cleaning up audio edits pay special attention to words or sounds that may not have been trimmed properly. Use edit tools like the “Ripple” tool in Adobe Premiere.

Simple basic transitions can create great visuals and can be combined in layers with dramatic impact. The image above shows different starting and ending points for cross-dissolves.

The cross-dissolves shown in the photo to the left produce the cross-dissolve effects shown in the above photo at mid-point in the transition with video clips and words blended together.

The refinement of the edit offers you a chance to make sure that your story is clearly communicated and the information is supported visually with extra B-Roll video, photos or graphics.

**Video Lesson Step 8 - Refine the Edit**

This lesson covers refining your rough edit by adding B-Roll and transitions plus more. [Hosted on our YouTube Channel this video runs 8 minutes 34 seconds - https://youtu.be/Euy65yLvosU](https://youtu.be/Euy65yLvosU)
Step 9 - Final Edit

A. Quality control on video and audio
B. Music and Titles
C. Video Lesson Step 9 - Adding the final details, music, closing and opening titles, participant names

9A The final edit is where you focus in on the details, add final touches, add titles, music if needed and build your opening and closing sequences. Informational, educational and even training or demonstration videos can be improved or benefit from following the steps in final editing. Quality control related to video and audio is key at this stage, audio quality can make a real impact on how your message is communicated.

If you did a good job selecting a well lit location to do your shoot without too much artificial lighting your video quality may be just fine, if the people in your video segments have odd skin colorations for example and don't look natural you may want to take a little time to learn how to do some basic color correction in the application you are using.

Most video editing applications have some features that help with what is often called “color grading” for color correction and image quality. For example, if you have video that is a little too dark, too bright, too yellow or orange, the editing application can help correct that. With some applications these features can be very complex and hard to learn, but often times these applications also have simple auto-correct features that cover some of the more common video quality issues.

If you are unsure about how to do color correction or make adjustments to your video and concerned about ruining your work in your project file, make a backup copy of your project. By saving a backup copy and even if you output a high quality video file of your edit, you can preserve your work before doing any corrective color or audio work, so if you mess up you can go back and try again. Also some editing applications give you the ability to use one of the tracks on your timeline as an adjustment layer or you can create an adjustment layer which will allow you to make adjustments to segments of video and not just individual clips on the timeline. Using this feature can save time and it makes it easier to remove corrections if you don't choose to use them. Making adjustments or color corrections to video can involve many factors like; luminance, saturation, balance, brightness, tone and more, in digital video you can make dramatic changes to the look of your video. When completing a basic video project you may not need to know them all of the color correction control options, but there are a few that will take your project a long ways.

Typical Video Correction Features and What They Do:

- **White Balance** - Correcting the white balance in your video is making the adjustment so the areas in your video that are supposed to be white show white and not tints of pink, yellow or any other color. The best place to start in color correction is to make sure your white balance is good, white balance alone may fix all your color issues at one time.
- **Auto Color** - automatically makes adjustments in tone and color aligning them to within normal ranges. If you shoot your video under harsh fluorescent lighting you may end up with a yellowish color cast that auto color can fix.
- **Auto Contrast** - will automatically adjust the range of difference between the darkest and lightest area in your video, attempting to give your video a more even range of dark and light areas of your video.
- **Auto Levels** - is a little like auto contrast however it adjust the mid-tones in addition to the very dark and light areas, often times you can get better details to come out by adjusting the levels.
- **Brightness & Contrast** - manual adjustment - gives you the advantages of auto color in adjusting tone and color but puts you in control of the adjustment where you can set it to how it looks best to you.
- **Color Balance** - manual adjustment - allows you to control many to the factors related to color quality at one time like; hue, lightness and saturation as well as in some cases shadow, mid-tone and highlight areas by the specific video colors of Red, green and Blue.

Additional reference materials and on-line training links related to color correction can be found in the [Digital Video Resource Guide](#).

Audio Level Adjustment and Filtering

Adjusting the audio levels and adding noise filters when needed is a very important step in finalizing your edit before outputting a video file. If the narrative of your video is not clearly audible it will be difficult to communicate your message, especially if the playback volume levels are not loud enough to play on standard equipment like computers, tablets or smart phones.

Most editing applications include features to help assure that you are getting the most out of the audio portion of your production. Like the video correction and effects features in the edit application, often times there are many audio controls and filters that can impact on the quality of your audio. If you didn't get good audio while recording and your audio has a lot of noise, echoing or interference, audio controls and filters can make some improvement, but they can't fix everything. If you have a low volume level recording, increasing the volume of the narrative will also raise the noise levels in your audio.

Some of the audio filters and controls available in video editors are complex and sophisticated, requiring some effort to learn and understand how they can be used. If you start with good clear audio from your shoot, finalizing your audio shouldn't require much effort, if you have major issues you will have your work cut out for you.
Audio production issues to pay attention to include; volume levels, balance (if working in stereo), noise levels, dynamics and echo or delay. When completing a basic video project you may not need to know them all of the audio control and effects options, but there are a few that will help assure that your narrative is audible.

**Basic Audio Terminology and What They Mean or Do:**

- **Volume levels** - volume unit meters - in digital audio production there are specific standards for volume levels to assure proper audio playback levels. Volume levels are the loudness of your audio and the use of a volume unit or peak program meter is an important tool for knowing that your audio level is correct. Most audio meters measure audio levels in decibels (dB) the nominal output levels for normal volumes is -12 dB with peak levels at -2 or -1 dB.

- **Volume level controls (Gain)** - Most editing applications offer several ways to control the volume level output of your audio including: master volume on the audio mixer, menu accessed audio gain controls and through key frame level controls on the timeline. Note: Key frame volume level adjustments are done on the timeline soundtrack, this type of volume control allows you to pin-point very small portions of the audio, control loudness of short phrases or even a few words.

- **Balance controls** - also known as Panning (audio) in stereo mixing allows you to control the volume levels between the left and right channels, by adjusting this control you can fix audio recordings that may have stereo channels with unequal volumes.

- **Normalization** - is a digital audio process that adjusts your audio levels to match a target volume range raising low volume portions to a normal level and reduce higher volume portions of your audio down to a selected peak level. This process changes the overall volume level of your audio.

- **Noise Reduction** - digital audio noise reduction relies on the ability of the software application to identify frequency ranges of the noise portion of your recorded audio and removing or dampening (lowering) the volume levels of those frequencies.

- **Equalization** - is a process of adjusting specific frequency ranges within your recorded audio to correct or enhance the sound. Raising or lowering the bass levels for example is a function of equalization.

**Timeline Audio Level Adjustment using Keyframe Edits**

Keyframe editing allows you to do precise selective editing on things like volume level in most editing programs. This example shows the use of keyframes to adjust the volume of the background music during a break in the narration [1]. The music track is track 2 in this edit timeline and the fine yellow line (see enlargement right) on the audio track indicates the volume level.

A keyframe [3] is added or removed at the location of the playhead [4 redline] by clicking on the small Add-Remove button [2] at the beginning of the timeline editor. Once added the Keyframe [3] can be dragged around to raise or lower the volume level at that location on the timeline. Typically 4 keyframes are needed to do the volume change shown in this example. One way to control the rate of change in the volume so it is not too abrupt; is by inserting additional keyframes [5] to the volume level line (fine yellow line) to allow for a more precise gradule adjustment of the volume. There are also audio transitions available in most editing applications for applying fade-ins, fade-outs and crossfades (see photo right for details).
Music and Titles

Adding titles and music to your video project can give the final video a more professional look and add credibility to your message. However, adding background music throughout your video may not be the best choice in every production. As with elaborate video transitions and special effects, too much music can also become a distraction from your message. Here are a few things to think about on titles and music.

At this stage in the process, some decisions need to be made:

- What needs to be in the title for the opening sequence?
- Do you need to identify your on-camera narrator and to you have their proper name spelling and title?
- Do you need to or want to roll credits in the end? Not all videos need credits at the end.
- Are you required to include any type of mandated notice or EEO/EEOC statement?
- Do you need or want opening/closing music or a music bed?

Should you add music?

Generally the answer to the question about having music playing during your entire video the answer is no. A little music during the intro and closing can add a nice touch but it’s not a requirement and there are rules on what (who’s) music you can use. Unless you have access to royalty free music that matches the theme or mood of your video, keep it simple and don’t try to use music throughout your video. One place music can save your production is if it can mask over a poor audio recording (audio with a hum or distracting noises) if this is the case be selective when picking the music and setting music volume.

Tips on using music:

- Music should be used as an enhancement, set mood, create impact and dramatic effect.
- Avoid full video length music beds with videos more then 2-3 minutes in length, or an average song length.
- If you are using a full-length music bed, keep the volume as low as possible.
- Don’t use music with voice or singing for your music bed during the narrative as it can be distracting.
- Be careful when selecting music, not everyone may like your taste in music.
- Don’t violate copyright laws. (Note: If you use music covered under copyright law, YouTube will restrict your video from playing or may allow the copyright holder to earn advertising revenue from your video when someone views it). YouTube has resources online to guide you in proper use of copyrighted works.
- When using music for your intros and closing sequences fade in and out of the music when possible. Also if you are using music during major theme/topic transitions.
- Avoid re-looping the same music track over and over in a longer video.

Titles

How you plan to use your video and your intended audience are guiding principles for titling and closing credits. When working a subject matter expert in your production, properly identifying that person in the video may lend credibility to your message, show gratitude for their participation and in general is good practice. Most video editing applications provide built-in tools and templates to make the process of adding titles and credits to your production simple and easy. These titling tools offer many features, take some to go through a tutorial specific to your editing application would be worth the time and will add to the professional look of your production.

Tips for Titles and Closing Credits:

- Follow guidelines for safe viewing and text area in your video to assure that your titles or closing credits don’t get trimmed off, most editing applications will allow you to display “safe area” guides on your video preview window.
- Think about readability of your on-screen text, considering color, contrast and size. Select colors that contrast well with the background video, are not too small and are pleasing to the eye for reading.
- Timing of your titles and credits should be considered, allow enough time when the text appears on-screen so your viewers can read the words. When scrolling credits or other text don’t scroll the text too fast if you want the information to be read by the viewer.
- PowerPoint templates can be useful for making graphic images like charts or just simple text graphics for use in videos. Just design your slides in PowerPoint then save the slides out as image files JPEG and PNG formats work great.

Video Lesson Step 9 - Final Edit

This lesson covers the final editing stage with a focus on the details like audio levels, names, titles and music. Hosted on our YouTube Channel this video runs 7 minutes 38 seconds - https://youtu.be/PMczdTeddQI
A Project File Versus Movie File: During the editing project the video clips in the storyboard or timeline are just placeholder references to the actual original clips. Using the clips in the editor does not alter the clips in any way. The editing application keeps track of the references in what is often called the ‘project file’. The project file is your edit, but it is not a movie or video file that can be used for playback or uploaded to YouTube or something like that.

Knowing how the video you have just edited is going to be used is very important when the time comes to output it to a usable video file. This can become very technical depending on your needs because there are many different video file types, different options on resolution and many different video media players. To keep things simple, a lot of the editing applications like iMovie or Windows Movie Maker have pre-set output options or “share” settings available for you to select from.

Depending on the video editing software application you are using, follow the default settings for exporting a video may not create the video file type or format you need. Pay attention to which video file format that you are outputting when doing the export, you may have shot your video in Full High Definition but you may not need to output your video to Full HD or that same quality standard.

The target size for many web-based “Hosting Service” like YouTube for storing and playing back your video file is files commonly referred to as 720p with a resolution size of 1280x720 pixels. If you are uploading a larger resolution file such as a 1080p 1920x1080 pixels, that host service will compress or essentially shrink your file down to match the 720p which can affect the playback quality on fine detail areas or if you have small text.

If your video is going to be uploaded and played on a web-based hosting services, consider matching their recommended quality guidelines for uploads, and output your video files from your editing software to match their standards. Matching the hosting service recommendations on file type, resolution and size may reduce the amount of compression and processing that the host service applies to your file. For example by outputting your video file in a size no larger than 1280x720 pixels (sometimes referred to as 720p) and output in proper format (.mp4) for YouTube following the YouTube guidelines for video uploads, the uploading and processing time will be reduced as will the amount of file compression. For most video projects video compression may not result in a noticeable difference, however in general you will get better results when compression or in some cases enlarging the pixel resolution size is kept to a minimum.

When you upload your file to your MyMedia account in Learn@UW-Superior the recommended guidelines for file resolution is also 720p and I cover those specifications and the upload process in more detail below (10B).

Link to YouTube Guidelines:
Recommended resolution & aspect ratios - https://support.google.com/youtube/answer/6375112?hl=en&ref_topic=2888648
Supported video files help - https://support.google.com/youtube/troubleshooter/2888402?hl=en
Advanced encoding settings help - https://support.google.com/youtube/answer/1722177?hl=en

NOTE: Changes to the resolution size of video files either through compression (reduction) or enlargement of the resolution can impact on the quality and appearance of the video. Video recorded at 480p and then enlarged to 720p or 1080p will look pixelated (fuzzy or grainy), compressing video from 1080p to 720p may cause loss of fine details, but it usually does not cause a noticeable change in the visual image.
Upload Work Flow:
• Log into your Learn@UW-Superior account through the website
• Click on the MyMedia icon on the menu bar towards the top of the page
• Click on the Add New drop down menu and select Media upload
• Click on Choose a file to upload and browse to locate the video file you want to upload to your MyMedia Gallery
• Add a name and description during upload, once the upload is done click the save button
• Once the file is saved you can publish it to the course where the file will be used

Note: When you save your uploaded media the first time it will be set to “Private”, you will need to “Publish” it to the Media Gallery to make it available for the course that the media will be used in. The selection of Galleries that you manage should show on-screen once you select the Publish option, read the choices carefully to be sure you publish it correctly.