Cinematography
508 SPRING 2017
Section (BLUE)

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Required Text Book

Title: Voice and Vision, A creative approach to narrative film and dv production

Author: Mick Hurbis-Cherrier
Focal press ISBN 13: 978-0-240-80773-7 ISBN 10: 0-240-80773-1

Use Google DOCs to access handouts and support materials

OVERVIEW
Welcome to Cinematography of CTPR 508. This class will introduce you to different approaches to lighting and grip, day extriors and shooting matching coverage. We will address individual shooting scenarios of each film on a weekly basis. Classes will consist of lectures, demonstrations, and in-class exercises.

COURSE OBJECTIVES
- To further the student's understanding and appreciation of the art and craft of cinematography
- To enhance the effectiveness of visual storytelling
- To develop the student's problem solving abilities
- To work together as a team

A Ditty Bag is essential and you will continue to add to your ditty bag throughout your professional career. The following items are a great starting point:

Screw driver for tripod

Leather Gloves

Slate/Dry erase

Mag light

Swiss army knife or multi tool

Small scissors (for gels)

Lens cleaner

Lens tissue

Circuit tester (radio shack across street)

You can purchase expendables at:

> **Mole Richardson - Studio Depot** expendable store.
>
> 12154 Montague St.
>
> Pacoima, CA 91331
>
> 323.851.0111 (ask about the student discount)
>
> **Filmtools**
>
> 1400 Burbank Blvd.
>
> Burbank CA
>
> 818-845-8066 (their regular prices are about the same as Mole's discounted prices)
>
> **Expendibles Recycler**
>
> 5812 Columbus Avenue
>
> Van Nuys CA 91411
>
> 818-901-9796 (best prices, selection varies)

GRADING:

In-Class participation	30
Assignments	20
Attendance	10
HD project (cinematograph-	40

You must discuss all absences from class with me prior to your absence. This is a workshop. If you miss three classes you drop a full letter in your final grade, i.e., a B to a C.One unexcused absence will result in a drop of your final grade by one notch of a grade, i.e., a B+ to a B. Two unexcused absences will result in a drop of two notches of a grade, i.e., a B+ to a B-.

Two unexcused lateness' will be counted as an absence.

SAFETY

The personal safety of yourselves, your cast and crew members is   a vital consideration as you plan and shoot your projects. Please check with your instructors before shooting if you have any questions or concerns. Read the safety handout and understand the contents. Footage shot under unsafe conditions will be withheld from the project; students privileges may be suspended: and grades lowered. Be sure to discuss all hazardous shooting conditions listed on the HSC handout with your instructors.

ACADEMIC CONDUCT

Plagiarism – presenting someone else's ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Section 11, *Behavior Violating University Standards* https://scampus.usc.edu/1100-behavior-violating-university-standards-and- appropriate-sanctions/. Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, http://policy.usc.edu/scientific-misconduct/.

Discrimination, sexual assault and harassment are not tolerated by the university. You are encouraged to report any incidents to the *Office of Equity and Diversity* http://equity.usc.edu/ or to the *Department of Public Safety* http://capsnet.usc.edu/department/department-public-safety/online-forms/contact- us.
This is important for the safety of the whole USC community. Another member of the university community – such as a friend, classmate, advisor, or faculty member
– can help initiate the report, or can initiate the report on behalf of another person. *The Center for Women and Men* http://www.usc.edu/student-affairs/cwm/ provides 24/7 confidential support, and the sexual assault resource center webpage sarc@usc.edu describes reporting options and other resources.

SUPPORT SYSTEMS

A number of USC's schools provide support for students who need help with scholarly writing. Check with your advisor or program staff to find out more. Students whose primary language is not English should check with the *American Language Institute* http://dornsife.usc.edu/ali, which sponsors courses and workshops specifically for international graduate students. *The Office of Disability Services and Programs* http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html
provides certification for students with disabilities and helps arrange the relevant accommodations. If an officially declared emergency makes travel to campus infeasible,
USC Emergency Information http://emergency.usc.edu/
will provide safety and other updates, including ways in which instruction will be continued by means of blackboard, teleconferencing, and other technology.

ASSIGNMENTS:

#1 Production design/style photos (Bring to Trio Meeting)

Cinematographers and Directors EACH bring10 images that serve to convey the look and feel of your film to your Trio Meeting. I'm looking for film stills, art photography, etc here. Something that inspires and helps communicate the look, color, vibe, mood of your film. Please do not bring location stills.

#2 Lighting and Camera overhead

Cinematographers please bring to class an overhead of your coming weekends shoot including lighting, and camera positions.

#3 Cinematographers self crit

(Submit via email not later than 6pm on the day of picture lock)

Self Crit is to consist of no more than two pages of _**thoughtful analysis**_ of your successes and shortcomings as cinematographer. What did you learn? What might you do the same and what might you do differently if you had the opportunity to do it again?

- describe the collaboration between your trio
- any other significant details of production that had bearing on your work
- any technical problems, challenges and what you did to deal with them
- any equipment problems
- any topics that you feel are relevant from your journal - keep camera log/journal of your experience.

Cinematography Schedule

Week	Date	Morning	Afternoon
1	01-09-17 Monday		
	01-11-17 Wednesday		
	01-13-17 Friday		**CAMERA WORKSHOP** 1p–5:00p **Stage TBA** Workshop Overview, Safety, Prep, Scouting, Exposure, Accessories, Camera settings.
	01-16-17 Monday	***Martin Luther King Day**-No Classes	
2	01-17-17 ***Tuesday**	**Workshop 2** 9a-11:50 **Stage 3** Day Exterior/ Grip and Lighting gear Intro to Color: Grading **SCA B-154**	

2	01-18-17 Wednesday	**TBD**	**P1 Trio Meetings** Assignment #1 - cinematographers and directors to bring 10 photos each that convey the look and feeling of the film as you see it. Assignment #2 – Cinematographers bring an overhead of the location where you are shooting with a lighting/camera plot.
3	01-23-17 Monday	**Proj 1 Dailies Screening SCA 204**	
	01-25-17 Wednesday	**Workshop 3** 9 – 11:50a **Stage 1** Interior Lighting: -Quality, Quantity, Angle -Chiaroscuro -Controlling Shadows. Matching coverage - 3 Point Lighting	
4	01-30-17 Monday	**Proj 1 Dailies Screening SCA 204**	
	02-01-17 Wednesday		
5	02-06-17 Monday		
	02-08-17 Wednesday		P1 Self Crit Due
6	02-13-17 Monday		
	02-15-17 Wednesday		*02-20-17 Monday Presidents Day-**No Classes**
7	02-21-17 *Tuesday	**Workshop 4 Stage 3-** Moving the camera Show clips and exercise	9 – 11:50a
	02-22-17 Wednesday		Trio Meetings 5-9 (TBD)
		P2 Trio Meetings Assignment #1 - cinematographers and directors to bring 10 photos each that convey the look and feeling of the film as you see it. Assignment #2 – Cinematographers bring an overhead of the location where you are shooting with a lighting/camera plot. Locations where you will be shooting (10 still images)	

8	02-27-17 Monday	**Proj 2 Dailies 9-11:50** Screening **SCA 204**	Trio Meetings (TBD)
	03-01-17 Wednesday	**Workshop 5** 9 – 11:50a **Stage 1** Lighting Faces/Lenses – clips and exercise	
9	03-06-17 Monday	**Proj 2 Dailies** Screening **SCA 204**	
	03-08-17 Wednesday	**Workshop 6** 1p-4:50p **Stage 1** Composition	
10	03-20-17 Monday		
	03-22-17 Wednesday		P2 Self Crit Due
11	03-27-17 Monday	**Workshop 7** 9 – 11:50a **Stage 3** Lighting a scene multiple ways: -early morning -mid day -night	Trio Meetings 5-9 (**TBD**)
	03-29-17 Wednesday		
	P3 Trio Meetings Assignment #1 - cinematographers and directors to bring 10 photos each that convey the look and feeling of the film as you see it. Assignment #2 – Cinematographers bring an overhead of the location where you are shooting with a lighting/camera plot.		
12	04-03-17 Monday	**Proj 3 Dailies** Screening **SCA 204**	Trio Meetings 5-9
	04-05-17 Wednesday		
13	04-10-17 Monday	**Proj 3 Dailies** Screening **SCA 204**	
	04-12-17 Wednesday		

14	04-17-17 Monday		
	04-19-17 Wednesday		
15	04-24-17 Monday		P3 Self Crit Due
	04-26-17 Wednesday		
16	05-03-17 Wednesday		
17	05-06-17 Saturday	**FINAL SCREENING** **1:30pm-3:30pm NORRIS** **THEATER**	

**This schedule is subject to change.

All Trio meetings must be scheduled in advance through myself and the cinematography SA and are set for 30 minutes. You must come prepared with questions, and be ready to take notes. If you require additional time, or additional meetings, they are to be scheduled directly with me.

Dress Code: The sound stage is an industrial work environment. All students must come to class prepared for physical work. You must wear long pants and close toed shoes. Shorts, skirts, dresses, sandals and flip flops will not be allowed. If you come inappropriately attired, you will be asked to leave and will be marked absent.

Also remember to come prepared with your tools and equipment.

Cameras are to be set up according to the USC EX1 Master Menu Settings
BEGIN by setting Menu 6 first.

Menu 6 – Others

- Camera Data – You will return to this setting after assigning all the recommended menu settings. Store –Will save all the selected settings to the S X S memory card. Recall will return all settings to those saved (stored) on the S X S card. *Be aware, formatting the S X S card will delete the stored camera data.*
- Assign Button 4 (Markers)
- Tally – Front: Off – Rear: On
- Battery Alarm – Low Batt: 5%
- Direct Menu: Part (allows you to access important items with joystick) Do not set to All – disables some functions
   * Full HD resolution is 1920x1080 pixels. When you set your video format, if the menu shows either 1920 or 1080, they both mean the same full resolution HD.)
- **Video Format – HQ 1920/24P** (or HQ 1080/24P)
- Clip - before you shoot – select a title prefix for your clips – reset number to 000
   **Day 1 can be 001, day 2 002, day 3 003, and day 4 004
- Format Media – Media A: Execute, Media B: Execute
   This deletes all media on a card. Always format in the camera, never the computer.

Menu 1 – Camera Set

- Gain Set up: Your preference – you can set
   L = -3, M = 0, and H = +6db or
   L = 0, M = +3, and H = +6db or
   L = 0, M = +6, and H = +9db….
   * Another way to handle the gain setting is to set all to -0 and use the menus to boost gain when needed. This prevents accidentally bumping the switch and introducing noise to the image.
- Shutter: Set for 180 for normal shooting.
   In low light (to increase exposure and/or or to increase motion blur) you can turn off the shutter with switch below the lens. EX Slow Shutter- You can test slow shutter effects as their use is subject to personal taste.
- MF Assist: Turn OFF – Use full manual focus. Slide focus ring back until it clicks. You can use auto focus for Macro shots, but remember to return to
- Color Bar Type: Multi
- Flicker Reduce**:** Set to off – or - select the appropriate frequency for the county you are shooting in – US = 60Hz in Vietnam 50Hz
- Zoom Speed: Controls handle top zoom. This is not a variable speed control like the handle. Discuss use with your instructor
- Interval Record: Time lapse (test as needed)
- Frame Record: Stop Motion (animation)
- SQ: (Slow Motion using a higher frame rate) For frame rates above 30fps, you have to reduce resolution to 720p – check with your editing faculty BEFORE shooting any slow motion.
- Record Review **–** 3 sec.

- Fader: Turn OFF
- White Switch: Mem
- Steady Shot and TLCS**:** can be accessed through the joystick

Menu 3- Video Set
- YpbPr/SDI Out Select: HD SDI
- YpbPr/SDI OUT Select: On
- Video Out Display: This will be greyed out.
- Setup: Off
- Down Converter: Squeeze

  In order to change the Setup to Off (if it is On) - one first must set the YpbPr/SDI Out to "composite", then set the Setup to Off, then set the YpbPr/SDI Out to HD SDI. (If the students are using an HDMI connected monitor, they will have to select HDMI.)

Menu 4 – LCD/VF SET
- Peaking: Set to Blue (or whichever color is your preference) and Mid
- Safety Zone: set at 90%
- Marker: On (This is for the center exposure percentage meter)
- Zebra: Both- Submenu setting Zebra level: 70
- Display: Turn on all items in display (you need this info – you can turn off with the DISPLAY BATT/INFO button on top of camera under the handle when operating). *As you become familiar with the camera, you can customize these settings to your preference.*

Menu 5 – TC/UB SET
- Timecode: Mode – Preset
- Run: Record Run
- Manually set time code according to production day:
  Day 1 = 01:00:00:00, Day 2 = 02:00:00:00, etc.
- TC Format: This will be greyed out

Picture Profile Settings:

The picture profile you use determines your camera's ISO (sensitivity to light). The exposure you select for any given shot will be a function of the ISO (sensitivity to light), the shutter speed (duration of exposure), the aperture (the opening that regulates the amount of light that passes through the lens), the gain (electronic signal passing through the sensor) and the filter factors of any filters you use.   All these factors must be considered together so that you can properly expose and create the images you envision that best serve your story.

The following recommended ISO settings assume a 0db (zero) gain. Each 6db of gain changes the ISO by a full stop. (+6db would double the sensitivity of your camera's sensor to light.) When you calculate your exposure, make sure the shutter speed you base your exposure on, with your light meter matches the shutter speed of your camera. For "nor-

mal" operation, 1/50   sec is recommended.

Picture Profiles:

FOR 295L/ 507- Students should work with the picture profile turned off. The camera will natively produce a nice looking REC 709 image that can be subtly adjusted by those students who elect to attempt rudimentary color grading. Those who do not do any grading will still have pleasing images, provided they light and expose them properly. The ISO is 400 with these settings.

**FOR 508**- Students can work with picture profile on and Gamma Select Setting Cine 3 if they want to do minimal color grading OR Cine 1 if they are interested in the opportunity to do bit more grading. The ISO is 320 with these settings. This leaves the choice to the students with the guidance of the faculty.

For 310- Students can work with the picture profile turned off (like the 295L/507 setting) OR with the picture profile on and Gamma Select Setting Cine 3 which will produce pleasing dailies -and allow them a bit more room to grade. This leaves the choice to the students with the guidance of the faculty.

Consult your cinematography faculty to set the appropriate picture profile for your project.

Picture Profile Settings:
- ***295L/507 will leave the Picture Profile Off**
- ***508 will turn the Picture Profile On and set the menus as follows**
- ***310 have the option to either leave the picture profile off or to select Cine 3, under the supervision of their instructor.**
  To select PP – Cine 3
- Press the **Picture Profile** button along the back of the camera
- **Profile Name** – PP1
- **Matrix:** Setting On/Select Cinema – All other settings should be set at 0
- **Color Correction:** Off
- **White:** Offset White: Off
- **Detail:** Off
- **Skin Tone Detail**: Off
- **Gamma Select:** Cine 3
- **Black**: 0
- **Black Gamma:** 0
- **Low Key SAT**:0

Setting up your cam-

era:

1. Set Diotper
    *   With the Iris closed so there is no image on your screen, adjust the slider under the viewfinder so that the text in the viewfinder is focused to your eye.
2. Auto v. Manual: (Always use manual controls)
    *   **Focus** switch is on the lens barrel – to change between Auto Focus/Manual Focus and Full Manual Focus, slide the focus ring forward or backward.
    *   **IRIS** switch is on the lens barrel
    *   **Zoom** switch is on the bottom panel of the front of the body – under the lens
    *   **White Balance** button is on the bottom panel of the front of the body – under lens
3. Press **Zebra** button on left side panel to turn on or off

4. Set LCD:
    *   Turn on the Color Bars by pressing the button on the top of the camera under the handle labeled BARS/CAM.

        Begin by setting up the monitor or viewfinder so that the 100% white square is shown as peak white on the monitor. This is done by increasing the contrast control until the white box stops getting brighter on the screen. Once it reaches maximum brightness, back the contrast level down until you can just perceive the tiniest of brightness changes on the screen.

        Next use the pluge bars to set up the black level. The pluge bars are the narrow near black bars at the bottom, next to the white square. The -2% bar is blacker than black so we should not be able to see this. Using the brightness control adjust the screen so that you can't see the -2% bar but can just see the +2% bar. The 4% bar should also be visible separated from the 2% bar by black.

        Color is harder to set accurately. Looking at the bars, the main upper bars are 75% bars so these are fully saturated, but only at 75% luma. The 4 colored boxes, 2 on each side, two thirds of the way down the pattern are 100% fully saturated boxes. Using the outer 100% boxes increase the saturation or color level until the color saturation of the outer boxes stops increasing, then back the level down again until you just perceive the color decreasing. You might find this easiest to see in the blue color band.

        You may find the setting for the LCD panel for your EX1 to be somewhere around: contrast at zero, color at zero and brightness at about +28 on most cameras. When shooting bright day exteriors, you may find it helpful to increase the brightness on your LCD.

5. External Monitor:
    *   If using standard def monitor, go to **Video Set** menu – **YpbPr/SDI Select**: Off
    *   If using an HD monitor, go to **Video Set** menu – **YpbPr/SDI Select**: On

    *Follow the instructions for setting up your LCD viewfinder to set up your monitor.

*Now go back and confirm all settings, including picture profile.

6. Now that you've selected all your settings, return to **Camera Settings (first one** in Menu 6 and store

REMEMBER:

1.– DO NOT leave the battery on the camera when you are not shooting, the battery will drain.

2.– Take care that the camera switch is actually turned off.

3 – Keep your lens clean.

4 – HD resolution is 1920x1080 pixels. Before you shoot – check to confirm that HQ 1080/24P (or 1920/24P) reads just below the time code in your monitor.

*Ask your sound faculty for your sound menu settings.