

# Brooklyn College Film Department



## Production Safety Manual



**At Brooklyn College, every student should strive for the highest standards of safety.**

**Cast and crew should work diligently to maintain a safe and healthful work environment.**

**Communication of information is one of the most effective ways to ensure safety.**

**REMEMBER, NO SHOT IS EVER WORTH INJURY OR DEATH!**

Disclaimer:

Many of the possible health safety issues that can impact film production are included in this Handbook. However, this Handbook does not purport to cover every possible contingency. There may well be situations that affect health and safety that have not been included. The safety protocols in the Handbook are intended to be adapted to other situations that may arise, but are not explicitly stated herein. The Film Department, Brooklyn College and CUNY reserve the right to make modifications to the procedures and policies in the Handbook as necessary and without advance notice.

## **WHAT TO DO IN CASE OF AN EMERGENCY:**

1. If someone is injured, seek immediate medical attention by calling **911**.
2. If someone is injured on campus, contact Brooklyn College Department of Campus & Community Safety at: **718-951-5511**

## TABLE OF CONTENTS

<b>Mandatory Safety Rules .....</b>	<b>1</b>
<b>Who is Responsible for your Safety? .....</b>	<b>3</b>
<b>safety Meetings .....</b>	<b>5</b>
<i>Potential Agenda for Safety Meetings.....</i>	<i>6</i>
<b>Call Sheets.....</b>	<b>8</b>
<b>Length of Day .....</b>	<b>10</b>
<b>Loading and Transportation .....</b>	<b>12</b>
<b>Vehicles and Driving .....</b>	<b>15</b>
<b>Clothing.....</b>	<b>17</b>
<i>Personal Protective Equipment.....</i>	<i>18</i>
<b>Weather and the Time of Day Hazards .....</b>	<b>20</b>
<i>Rain .....</i>	<i>21</i>
<i>Lightning .....</i>	<i>21</i>
<i>Cold Weather .....</i>	<i>24</i>
<i>Hot Weather .....</i>	<i>25</i>

<b>Location Safety .....</b>	<b>26</b>
<i>General Location Guidelines: .....</i>	<i>26</i>
<i>International Productions .....</i>	<i>27</i>
<i>Good Housekeeping .....</i>	<i>28</i>
<i>Structural Damage .....</i>	<i>29</i>
<i>Trip Hazards .....</i>	<i>30</i>
<i>Shooting After Dark.....</i>	<i>30</i>
<i>Garbage/Mold/Pests/Toxic Waste .....</i>	<i>31</i>
<i>Lead Paint .....</i>	<i>31</i>
<i>Asbestos .....</i>	<i>32</i>
<i>Ventilation.....</i>	<i>34</i>
<b>Electrical Hazards .....</b>	<b>35</b>
<i>Electric Rules and Guidelines.....</i>	<i>35</i>
<i>Circuit Breakers and Fuses .....</i>	<i>38</i>
<i>Calculating Electrical Capacity.....</i>	<i>39</i>
<i>Electric Shock .....</i>	<i>40</i>
<i>Grounded .....</i>	<i>41</i>
<i>Power Tools .....</i>	<i>42</i>
<i>Electric House Keeping.....</i>	<i>43</i>

<b>Ladders</b> .....	<b>44</b>
<b>Lifting</b> .....	<b>46</b>
<b>Working with Talent</b> .....	<b>49</b>
<i>Minors</i> .....	50
<i>Nudity</i> .....	53
<b>Additional Safety Concerns</b> .....	<b>54</b>
<i>Weapons</i> .....	54
<i>Open Flames</i> .....	58
<i>Special Effects</i> .....	60
<i>Stunts</i> .....	63
<i>Boats and Water</i> .....	64
<i>Animals</i> .....	66
<b>Specialized Equipment</b> .....	<b>68</b>
<b>Safety Common Sense</b> .....	<b>72</b>





## Mandatory Safety Rules

1. There are **no weapons** allowed on the set of any Brooklyn College Film production. This includes, but is not limited to, guns, knives, and swords. For information on prop weapons, see weapons section. For questions about what qualifies as a weapon, contact the Office of Production & Safety.
2. There are **no pyrotechnics** allowed on the set of any Brooklyn College Film production. This includes, but is not limited to, fireworks, explosions, and squibs. For questions about what qualifies as pyrotechnics, contact the Office of Production & Safety.
3. Electrical **tie-ins are not permitted**; they are dangerous and illegal. Students are not permitted to tie-in to electrical panels on any Brooklyn College Film production.
4. There are **no drugs or alcohol** permitted on the set of any Brooklyn College Film production. This includes “wrap beer.”

5. There is **no shooting on or from helicopters**, airplanes, or active train tracks.
6. There is **no rooftop shooting** allowed on any Brooklyn College Film production.
7. There is **no shooting in common areas** of Brooklyn College Film building, lobbies, halls, or elevators that may impede an egress path unless appropriate permission is granted.
8. A student shall **not be required to perform** any activity that makes him or her feel unsafe.
9. Students who **breach safety rules** will be held accountable. The student or students who are getting credit for a project are responsible for taking all precautions to protect the health and safety of the cast and crew.
10. It is up to **every person** to act responsibly and work safely in compliance with all applicable rules and safety guidelines.

## Who is Responsible for your Safety?

No school safety program or set of government regulations can cover all possible unsafe acts. Ultimately, it is up to you to work safely, to prevent accidents, and to avoid injury to yourself and your fellow cast and crew.

The best time to identify a safety issue is before someone gets hurt! This can be accomplished by being safe:

- Scan your surroundings!
- Assess the potential risks and hazards!
- Find out more about these dangers!
- Ensure the proper training of all members of a production!

### **Remember:**

- Never operate equipment or perform a task for which you have not been properly trained.
- Never work alone in a hazardous environment.

On the set of all Brooklyn College Film productions, the Assistant Director (AD) takes the roll of the Production Safety Officer. On a small production that doesn't have an AD, the Director must take the roll of the Production Safety Officer. The Production Safety Officer is in charge of maintaining safety on the set or location, and must take action to eliminate or minimize safety hazards. The Production Safety Officer also coordinates safety meetings.

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## Safety Meetings

The best way to address safety concerns is to conduct safety meetings. Whether you are on location or on the soundstage, a safety meeting should be called to share information and address all safety concerns.

### **When to call a Safety Meeting:**

- The beginning of the day on the first day of shooting.
- When there is a new location or circumstance.
- When the current plans change.
- When there are stunts. Everyone on set must be aware of the stunt and how it will be performed and covered.
- When there are prop weapons. Everyone must be made aware of any prop weapon on the set.
- When there is new or specialized equipment being used.

- When there are any special effects. Everyone on set must be made aware of the special effect and how it will be implemented and shot.
- When the shoot is on or in water. All protocol and safety issues must be discussed.
- When there is a significant change in the number of cast and crew working on the production.

### **Potential Agenda for Safety Meetings**

- Discuss the rules that apply to that specific location.
- Discuss the day's action and establish staging areas.
- Identify any potential hazards and make cast and crew aware of them.
- Discuss the power requirements at the location and electrical hazards.
- Establish safe work areas and off limits areas.
- Loading/unloading and Parking at the location
- Provide guidelines for working with any safety concern.

- Discuss emergency procedures. Point out all fire exits and fire extinguishers to discuss evacuation plan in event of fire or other catastrophe.
- Create a meeting place outside the building in case of emergency.
- Let cast and crew know that if they have any safety concerns they should feel comfortable to voice those concerns.
- Let cast and crew know that they need to report any injury to the producer.
- Point out sprinkler systems to crew and make sure lights are not set up near sprinkler heads.
- Discuss company moves taking place during the day.
- At the end of the meeting ask if anyone has any questions or concerns.

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## Call Sheets

All call sheets must have the following information. If the shoot does not use a call sheet, then the producer must have this information.

- The Brooklyn College Department of Campus & Community Safety Number: 718-951-5512.
- The Film department phone number: 718-951-5664.
- The Office of Environmental Health and Safety phone number: 718-951-5400
- Producer and Location Manager contact numbers.
- Names of all cast and crew members on the set that day.
- Weather forecast.
- Nearest hospital address and phone number.



- Address of the location you are shooting at.
- Special equipment, special effects, props, stunts, and any other needs.
- Any special rules for that particular location.
- Directions to location, including MTA, should be attached.

## Length of Day

**The maximum shooting day is 12 hours.**

- Work period starts at crew call and is inclusive of wrap time.
- Working extended hours increases fatigue, leading to sloppy work and mistakes, and creates a scenario for an unsafe workplace. It also imposes serious risk for students who have to drive home after the shoot.
- Having a limit to the workday will empower students who are tired or have other obligations, to other projects or to themselves.
- There will be a meal break no later than 6 hours after crew call.
- There will be a minimum turn-around time of ten hours from the time the entire production is wrapped for the day until crew call the next day.
- Driving time must be included in the length of day.

- The production can go longer if there is a swing crew. Other crewmembers can come in later, but no student is permitted to work beyond 12 hours.
- Fatigue becomes a bigger issue when driving from the set after a long workday.
- Single-car accidents occur at a much higher rate when a driver is sleepy.
- Even the greatest exertion of will cannot prevent sleep-deprived drivers from falling asleep in an instant.
- The capacity to concentrate at the wheel is reduced as a result of sleep deprivation.

*“As members of the ASC and as Directors of Photography, our responsibility is to the visual image of the film as well as the well being of the crew. The continuing and expanding practice of working extreme hours can compromise both the quality of our work and the health and safety of others.”*

*-Academy award-winning cinematographer Conrad Hall ASC, in the documentary “Who Needs Sleep.”*

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## Loading and Transportation

- Vans and cube trucks are significantly larger, wider, longer, and taller than the average automobile. 'Spotters' are recommended to assist with parking these vehicles.
- Loading and unloading areas should be clear of other traffic, pedestrians and people not involved in loading or unloading.
- Level to maintain stability. Trailers should be parked on firm level ground.
- Loads should be spread as evenly as possible, during both loading and unloading. Uneven loads can make the vehicle or trailer unstable.
- If a single layer of equipment does not fill the vehicle, move the cases to the front, just behind the front seats, to prevent the equipment from shifting forward under heavy braking.

- If more than one layer of equipment is required, pack the lenses, monitors, filters, and other fragile items on the floor so that they are less likely to be dropped and bounced around.
- Loads should be secured, or arranged so that they do not slide around. Ratchet and tie down all your hampers, crates, and dollies.
- Checks must be made before unloading to make sure loads have not shifted during transit, and are not likely to move or fall when restraints are removed.
- Vehicles must never be overloaded. Overloaded vehicles can become unstable, difficult to steer or be less able to brake.
- If the vehicle has a lift gate, additional caution is required:
- Ensure the vehicle or trailer has its brakes applied and all stabilizers are used. The vehicle should be as stable as possible.

- Always check the floor or deck of the loading area before loading to make sure it is safe. Look out for debris, broken boarding, etc.
- Only one person at a time should operate the lift gate and they should be constantly watching to be sure that no one is in harm's way. They should always give a clear warning that the lift gate is "going up" or "going down" to alert crewmembers to stay clear.
- Follow the manufacturer's guidelines and load capacity ratings.
- When not in use, the lift gate must be positioned flat on the ground or in the stowed position.
- During your productions, make sure that someone stays with the equipment vans and/or trucks at all times.
- Equipment stolen from an unattended vehicle will not be covered by insurance and will be the responsibility of the production team.

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## Vehicles and Driving

Shooting in a vehicle presents significant challenges and brings up major concerns when it comes to safety. There are limited circumstances when it is permissible to use a vehicle on a BC Film production.

- The Office of Production and Safety must pre-approve all driving shots.
- Car mounts are only allowed when using a process trailer.
- When using car mounts you must have someone who is trained and qualified to rig car mounts.
- No lights are allowed. Lighting the driver creates a dangerous hazard, putting you, the driver, and the public at risk.
- Students are not permitted to have actors drive a car.

- Everyone in the vehicle must use seatbelts.
- All tow rigs on a BC Film production must be **approved** by both your professor and by the Office of Production and Safety.
- **Tow rigs** must be driven by a trained, licensed, and qualified professional.



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## Clothing

We live in an area with a diverse climate. Winters are harsh and summers can be very hot. It is important to have proper gear to guard against the elements. It is easier to guard against frostbite, hypothermia, heat stroke, and heat exhaustion than it is to treat it.

- It is important that footwear be sturdy sneakers or boots. There are no high-heeled shoes or open-toed shoes allowed on set. This applies to all crew including the director and producer. The only exception is for actors in wardrobe.
- Jewelry, loose sleeves, exposed shirt tails, neckties, lapels, loose cuffs or other loose clothing shall not be worn on set in which it might become entangled.
- Long hair shall be tied back when working on set and/or equipment with moving parts.

- A pair of thick leather work gloves shall be worn by film crews whose work exposes them to potential injuries, such as exposure to cuts, burns, harmful physical hazards, chemical agents or electrical hazards.

## Personal Protective Equipment

Personal Protective Equipment (PPE) should be selected based on an assessment of the conditions, equipment, and potential materials (i.e. set building/special effects) to be used.

PPE includes:

- Knee protection: Knee pads, cushioning pads (rolled sound blanket).
- Eye and face protection: Safety glasses, full-face shields.

***NOTE:*** *sunglasses or prescription eyeglasses may not provide appropriate eye protection.*

- Hearing protection: Earplugs and Earmuffs

**NOTE:** *When operating or near loud equipment, amplified sound, pyrotechnics or gunfire, crewmembers must wear hearing protection.*

- Head protection: Hard hats and Helmets

**NOTE:** *Operation of vehicles, such as motorcycles, all terrain vehicles, bicycles, etc., always require the use of a helmet.*

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## Weather and the Time of Day

### Hazards

**Pre-planning can reduce many of the potential dangers posed by inclement weather.**

The AD should develop an "**action plan**" when preparing to use locations that may present an inclement or severe weather hazard. The **action plan** should include a method for communication with cast and crewmembers in the event of inclement or severe weather. The communication methods should reflect the conditions and circumstances at the scene.

Other elements to include should be site specific procedures which include methods and routes of evacuation, meeting areas, a means of establishing a head count for cast and crew members and procedures for equipment shut-down, stowage and/or removal. If there is the possibility of inclement or severe weather, a "**safety meeting**" shall be held to review and communicate the elements of the **action plan**.

## **Rain**

Power must be shut down.

- Secure and protect all equipment and electrical power.
- Cover all electrical connections with plastic and isolate them from the ground with wooden packages, like apple boxes.
- Pop-up tents and camera rain covers are vital for keeping your equipment dry.

## **Lightning**

Lightning results from the buildup and discharge of electrical energy in clouds. Lightning may strike several miles from an associated thunderstorm and may strike when no clouds or rain are present.

- When working in lightning prone areas, the use of a lightning detector/meter is highly recommended. If a meter is not available, it is possible to estimate the distance of lightning by the thunder. When lightning is seen, count the seconds until thunder is heard and then divide the seconds counted by five to obtain the approximate distance in miles.

- 30-30 rule: The first 30 means if you count to 30 seconds or less (from lightning to thunder), the lightning is within 6 miles of your location and you are in potential danger and should seek shelter. The second 30 means you should wait 30 minutes from the last flash or thunder to establish an "all clear."
- Seek shelter in a sturdy building, a hardtop automobile or truck with the windows rolled up. If such cover is not available seek shelter in wooded areas with thick small trees. Avoid isolated trees.
- Avoid high ground and keep clear of tall objects, towers, aerial lifts, camera booms, scaffolding, fences or other metal equipment.
- Avoid contact with any body of water.
- Avoid using a telephone or cellular phone.
- Where appropriate, shut down generators in accordance with the established action plan.
- Avoid using other electrical equipment or appliances.

- When instructed, move to the pre-determined evacuation area.
- Do not attempt to return to the area until an "all clear" signal has been given by the AD or production management.

## Cold Weather

- When working in cold conditions, the two most common hazards are hypothermia and frostbite. With proper awareness and pre-planning, these hazards can be eliminated.
- Symptoms of Hypothermia include intense shivering, muscle tension, fatigue, and an intense feeling of cold or numbness. At the first sign of any of these symptoms, go inside and get warm.
- Dress appropriately; several layers work well to help control varying periods of exertion and rest.
- Provide adequate heated shelters, food, and hot liquids for cast and crew.
- Drink plenty of fluids; water is best.
- If you do not need to be outside, go inside, even if it is only for a few minutes.
- If you cannot go inside, exercise, jog in place, shake your arms, these activities will increase your circulation and increase heat.
- The cold will slow down how quickly you can perform even the simplest tasks. Pad your schedule accordingly.



## Hot Weather

- Drink Plenty of Water: Dehydration occurs quickly no matter how well acclimatized to the heat. The average person loses between 1 and 2 quarts of fluid an hour in perspiration during heavy exertion in hot weather.
- Know the location(s) of the closest drinking water supplies & the nearest cool resting place.
- Use sunscreen or sun block (with SPF 30+) and reapply as needed.
- Get out of the sun or away from the source of heat and find a cool, preferably well ventilated, resting place when you are starting to overheat or need to cool down.
- Eat light meals. Hot, heavy meals add heat to the body.
- Symptoms of Heat Exhaustion include, but are not limited to, sweating, cool or clammy skin, weakness, fatigue, nausea, vomiting, dizziness, headache, fast or weak pulse, and/or fast or slow breathing.
- Should these symptoms occur seek medical assistance immediately.

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## Location Safety

Safety starts at the very first stages of your shoot. Early on in the pre-production process you will be seeking locations. While picking a location that will be creatively satisfactory, you must also keep an eye on safety.

### General Location Guidelines:

- Permission from the property owner is required to shoot.
- There is no smoking on the set of BC Film productions. The only exception is actors smoking in a scene. Smoke only in designated areas.
- Familiarize yourself with each location. Note all exits. Everyone should know what to do in case of an emergency.
- Fire equipment (hydrants, extinguishers, sprinklers, hoses, etc.) must be accessible at all times.
- Proper exit signs must be posted.

- Inform your professor when working in a remote location.
- When cell phone service is unavailable in a particular location, determine where you have to go for a reliable signal and find the nearest landline you can access in case of emergency.
- Always be aware of people working above and below you.
- Never run on the set. Don't rush and never panic. It is important to stay poised in order to make clear and safe decisions.

## **International Productions**

All international productions must be approved by the professor and the Chair of the Brooklyn College Film Department.

## Good Housekeeping

- Keep work area neat and organized. Preplan use of your space on the location scout: figure out shooting areas, staging areas, and holding space.
- When shooting in a public location, be sure all equipment is in a secure place or someone is watching it.
- Do not obstruct doorways, business access, driveways, or walkways with gear or people.
- Use courtesy lights to illuminate a hazard, stairway, platforms, cables, and an exit door.
- Do not put liquids in or on equipment cases. Equipment should be stored in a safe, dry place.
- Do not leave equipment unattended or in unlocked vehicles.
- Clasp all cases when shut. The next person to come along and pick up that case could easily assume the case is clasped.

## Structural Damage

- When scouting a building that may be picturesque and perfect for your scene, it might have structural damage. The following list contains some warning signs of structural damage.
  1. Rotted floors
  2. Crumbling pilings
  3. Rickety staircases
  4. Sagging floors
- Even sound buildings can be rendered dangerous if altered by removing walls or parts of walls, beams, or other support structures.
- If there are doubts about a building's integrity, a professional engineer must be brought in, or the production should seek out another location.

## **Trip Hazards**

- All trip hazards must be identified, then removed or marked in an obvious manner.
- All holes should be guarded or covered.

## **Shooting After Dark**

Special care must be taken when working at night. The lack of light creates safety issues and fatigue is a much greater factor.

- Everyone should have a flashlight.
- Turnaround time should consider adaptation to an off-hour schedule, particularly in consideration to driving.
- Work lights should be set up when possible.
- Trip hazards need more attention drawn toward them at night. Set work lights to illuminate trip hazards.

## **Garbage/Mold/Pests/Toxic Waste**

If you find a location that contains animal or human excrement, dead animals, rodent nests, discarded needles, used condoms, moldy and mildewed materials, and similar unsanitary substances, do not shoot at this location.

- Do not remove these substances or clean it yourself. Only professional waste handlers can safely remove the refuse that is listed above.
- There are many diseases one can get by being exposed to such substances; do not take any chances by working in a toxic environment.

## **Lead Paint**

- Buildings built before 1978 should be assumed to contain lead paint.
- Lead paint is most dangerous when air-borne.

- Even well painted over or encapsulated lead paint can be made air-borne if renovation occurs or if paint becomes damaged.
- Paint that leaves a chalky residue on your hands or is chipping and flaking off walls is a source of lead and lead dust.
- Windows and sliding doors that create dust could send lead air-borne.

## **Asbestos**

- The inhalation of asbestos fibers can cause serious diseases, including cancer.
- Only a brief exposure to asbestos can cause illness.
- When a building is old and is despair or abandoned, it may have old exposed asbestos. It is difficult to know if some of these materials have asbestos. If there is any suspicion of asbestos, it is better to seek a new location.



- The following is a list of potential places to find asbestos:
  1. Insulation around pipes, furnaces, and beams in the form of paper, cardboard, a powdery material under a cloth covering, cord and rope blown onto beams, and in many other forms
  2. Fibrous-looking insulation is sometimes packed around lighting fixtures or electrical equipment
  3. Fire curtains in old theaters
  4. Old ceiling tiles
  5. Old plaster
  6. Roofs were made of asbestos until the mid 1970s
- If unidentified dust is being disturbed during the scout or a shoot, it may contain asbestos. Shooting should stop immediately and premises vacated.

## Ventilation

- Mold on a ventilation system is an obvious hazard. A location with mold on or in a ventilation system is toxic and would not be acceptable.
- Adequate ventilation must be maintained when the crewmembers are exposed to any toxic substance/material.
- A certain amount of fresh air is needed for good health, especially in hot locations.

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## **Electrical Hazards**

Working with electricity must not be taken lightly. There should always be a heightened sense of awareness when working with electricity. If you are not sure of how to proceed when using lights or distribution, then do not guess: get help. Incorrect application of electricity can result in serious injury or death.

### **Electric Rules and Guidelines**

- There are no electrical tie-ins permitted on any BC Film production.
- Most high voltage power lines are not insulated and are extremely dangerous. Always assume power lines are not insulated. Do not work or place any equipment within 12 feet of electrical power lines.
- Do not reach for an electrical device that has fallen into water. Unplug the device immediately.

- Do not place lights near sprinkler heads. Some sprinkler heads are very sensitive.
- Do not leave hot lights unattended.
- Do not plug in lights while light switches are in the on position.
- Do not change a bulb while the light is plugged in.
- Always wear gloves when changing bulbs. Never touch bulbs with bare hands, they leave residue that can shatter the bulb when it heats up. HMI bulbs are highly sensitive.
- Always examine the condition of all the plugs, cables, and equipment for exposed wire, excess wear, frayed, breaks or cuts in the insulation. Do not use damaged equipment. Return this equipment for repair.
- If you must lay electrical cables across doorways tape them down. If rubber matting is available, use it over cables and tape the matting down.
- When working with lights always wear leather gloves. This will protect you against burns, but not against electrical shock.

- Always hold the cable connector or plug when disconnecting a cable. Never pull from the cable.
- Do not use aluminum ladders when working with lights.
- Make sure all connections are solid. Faulty connections are a major cause of electrical accidents.
- When an electric cable is hot, there is a problem. Check the connection; if the connection seems solid then remove the cable or the light from usage.
- Frequent interruptions of power, flickering or dimming lights are signs of a faulty electrical system.
- When a light is on a stand, the power cord should fall straight to the ground at the base and have some slack coiled or in a figure eight at the base. It is a good practice to run the cable under the sandbag so that if someone trips on the stinger, the strain will be absorbed at the bottom of the stand and will not pull the whole light over.
- One or more sandbags should be placed on each light stand depending on the size of the light.
- Make sure there is strain relief on the cable coming out of the light and the cable is not being pulled from the back of the light.

## Circuit Breakers and Fuses

- Do not obstruct circuit panels. Panels should have a minimum three-foot clearance. Electric panel doors must be operable and must remain closed.
- There should be a three-foot clearance around circuit breakers. All electric panels should have clear access; a blocked panel is a serious hazard.
- Do not use the circuit breaker as an on and off switch.
- If you blow a fuse or pop the circuit breaker find the problem before changing the fuse or resetting the circuit breaker.
- Never replace a fuse with a larger one. For example: If you blow a 15-volt fuse, you can't replace it with a 20-volt fuse.
- The circuit breaker panels must not be exposed. Keep the panel door closed.
- Locate electrical panels before shooting, preferably during the location scout.

## Calculating Electrical Capacity

- It is important to calculate the electrical capacity at your location. The amount of amps (current) available to you on a circuit is displayed on the circuit breaker. If it is an older house it will be on the fuse.
- Use this formula when calculating amps. **Amps = Watts ÷ Volts.**
- Standard voltage in the US is 120. Always use 120 for volts. That number changes outside the US.
- Watts are based on the power usage of the light, tool or device you are using.
- Add up the wattage on your lights, tools and devices and you have the watts portion of your formula.
- If you have several circuits then distribute the power usage.
- Do not overload the circuit.
- If lights must be used continuously for over three hours then use only 80% of available amperage.

## Electric Shock

In the event that someone comes into contact with a live wire, completes a circuit, and goes into electric shock the biggest danger is that the person's muscles will contract and freeze, and will not be able to pull away from it. The severity of an electrical injury and the likelihood of cardiac arrest and death are directly proportional to the length of time a person is shocked.

- Do not touch someone who is in contact with energized exposed parts. By touching that person you too will receive an electric shock.
- When some one is being shocked, a quick response is necessary. Turn the power off immediately.
- If a person has been shocked call for emergency medical service. If they seem uninjured it is still necessary to go to a doctor to see if there was any internal damage done.
- After getting the person to the hospital notify the Office of Production and Safety.



## Grounded

Do not let your body become grounded. If you are grounded you have the potential of becoming part of the electric circuit and open to having electricity pass through your body. This can result in serious injury or death.

The following is a partial list of the serious risks on both interior and exterior locations that could cause you to become grounded.

- Wet hands
- Wet feet
- Wet or damp ground floor
- Wet cables
- Any place where there is water
- Faulty circuits at your location
- Touching two lights at the same time
- Faulty wiring of your lighting equipment, devices or cables
- Insulation breaks or cuts in the cable
- Touching electrical equipment and a grounded object

## Power Tools

- Power tools are dangerous unless they are handled with care and respect.
- Do not use a power tool you have not properly trained on.
- Manufacturer-provided guards should be left on and intact.
- Never carry power tools by their cords and never shut them off by yanking the cord from the outlet. This puts too much stress on the cord and other connections.
- If a power tool is treated roughly, dropped, banged around, or gets wet, the insulation may weaken and present the possibility of a shock hazard. If the operator is standing on a wet conductive surface, the shock can be fatal.
- Insulating platforms, rubber gloves, and rubber mats provide an additional safety factor when working with electrically powered tools in damp locations.

- Regular inspection and maintenance is important. Inspect the tool before using it. Make sure the cord is in good condition. Check the trigger. Make sure it works easily; that the trigger doesn't stick, and the power goes off quickly when the trigger is released.

## **Electric House Keeping**

- Do not place objects, food or liquid on electrical equipment.
- Maintain an organized staging area.
- Always keep the set and staging area clean by picking up pieces of gel, clothespins, black wrap and other lighting accouterment. It is good to be neat and organized and avoid unnecessary trip hazards.
- When lights are not used, bring back to staging area. Coil unused cables and also return to staging area.
- Turn off power whenever possible.

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## Ladders

Ladders are quite common in daily life, and most of us have been on one at some point. They are also quite common on the set, but something we shouldn't take for granted. Here are a few things to keep in mind when working with ladders.

- BC Film allows use of stepladders up to 10 feet in height.
- Examine the ladder for damage or defects. If there is a problem with the ladder, do not use it.
- When climbing the ladder, always face the ladder and maintain three points of contact on the ladder.
- Use the appropriate size ladder for application. Don't stretch or reach too far. If your navel is on the outside of the ladder, you are reaching too far. Either move the ladder or get a higher one.
- Do not straddle between the ladder and another object.
- Do not stand on the top two steps.

- Do not place ladder on uneven surfaces. Always place ladders on level surfaces. If need be, stabilize the ladder with a sandbag.
- Only one person may use a ladder at a time.
- Do not reposition the ladder while you are on it.
- Do not leave any tools or equipment on top of the ladder.
- Do not use a metal ladder when working with lights.
- When shooting exteriors, beware of slippery surfaces, wind, and power lines.

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## Lifting

Even though we enjoy the art and craft of filmmaking, it cannot be denied there is a lot of hard work involved. Many back and neck injuries are caused by improper lifting. Taking a couple of seconds to get into the proper position to lift heavy equipment will prevent short- and long-term injury. Here are a few tips to keep in mind when lifting equipment or anything else.

### Lifting Guidelines

- Assess the weight of the load.
- Position yourself as close to the object as possible.
- Position feet at least shoulder width apart.
- Get a good grip.
- Always bend at the knees.
- Keep your head up and back arched.
- Lift smoothly with the legs.

- Inhale and tighten abdomen before lifting; exhale as you lift.
- When possible, use dollies and hampers to move gear.
- If something is too heavy, get help. If you have to strain to carry the load, it is too heavy.

#### **Two-Person Lifting**

- Communicate and time the lift.
- Plan the lift and landing.
- Clear the path and space where equipment will land.

#### **Things to Remember**

- Avoid overhead lifting when possible.
- Do not reach on a ladder; adjust the ladder to get closer.
- Do not twist your body while lifting.
- Do not rush; use slow and smooth movements. Hurried, jerky movements can strain the muscles in your back.

- Do the work with your arms and legs, not your back.
- Take caution on slippery and uncertain surfaces.
- Back and neck injuries are more likely to occur when you are fatigued.



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## Working with Talent

Particular care must be taken with talent. Actors are often not as aware of the possible hazards on a set as crewmembers are. It is the AD's responsibility to get the actors to the set and make them aware of any hazards. If there is not an AD, this task falls on the producer.

- Have someone escort actors from the holding area to the set.
- Working with the elderly or disabled also takes more care and attention. They are more vulnerable to falls and exposures, including dehydration and hypothermia.
- An unbalanced elderly person is much more likely to trip over something on set and is also more susceptible to injury.

## **Minors**

When working with minors, extra care must be taken. Safety becomes a larger issue when young children are on the set. They have less awareness of the potential hazards and need special attention.

- The chaperone that accompanies the minor to the set is not permitted to do any other work on the set. The chaperone's only job is to watch over the minor.
- A parent or guardian, not the chaperone accompanying the minor to the set, must sign a talent release form.
- When working with minors (age 17 years or younger), BC Film mirrors the SAG minor workday rules.

### **Workday Rules**

- Minors may not work before 5:30 am or after 12:30 am. A minor's final workday must be concluded at least 12 hours before the beginning of his or her next regular school day.
- On a school day (determined by the school where the child is enrolled), school-age minors must receive three hours of education between the hours of 8:00 am and 4:00 pm.

- A parent or guardian must accompany minors through age 15. Minors age 16 and 17 may work without a parent or guardian present. The parent or guardian is entitled to be within the sight and sound of the minor at all times.
- Minors who are high school graduates are exempt from the child labor laws and may work on the same basis as adults.

### **School-Age Minors**

On a school day, school-age minors may work these hours:

- Ages 6 to 8: 4 hours of work time with a maximum of 8.5 hours on the set.
- - Ages 9 to 15: 5 hours of work time with a maximum of 9.5 hours on the set.
- Ages 16 to 17: 6 hours of work time with a maximum of 10.5 hours on the set.
- On days when school is not in session, school-age minors may work an additional two hours.
- On all days, minors must have at least one hour of rest and recreation and one half-hour meal break.

### **Pre-School Age Minors**

Minors who are 6 months through 5 years do not attend school on the set, even though they may attend pre-school or kindergarten on a regular basis. Pre-school age minors may work these hours:

- Ages 6 months to 2 years: 2 hours of work time with maximum of 4 hours on set.
- Ages 2 to 5 years: 3 hours of work with maximum of 4 hours on set.
- Ages 6 months to 5 years must have at least one hour of rest and recreation.

### **Infants**

Infants under the age of 1 month are not permitted to work on set. Infants under 6 months of age are limited to the following schedule:

- Infants can only be on set between the hours of 9:30 am and 11:30 am or 1:30 pm and 3:30 pm.
- Infants under 6 months but over 1 month of age are only permitted to work 20 minutes (maximum of 2 hours on set.)

## Nudity

When you are working with a nude actor, the utmost care and consideration should take place. The actor is in a very vulnerable position on the set and the situation calls for discretion, thoughtfulness, and tact.

- If an actor is feeling uncomfortable with the nude scene and has reconsidered his or her decision on the day of the shoot, he or she must not be forced or coerced into performing.
- There must be at least one crewmember, apart from the director, who is of the same gender as the nude actor.
- When an actor is performing nude, a **closed set** is recommended. That means the minimal amount of crew needed should be on the set.
- Provide a bathrobe in between takes if necessary.

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## **Additional Safety Concerns**

### **Weapons**

Even on major motion pictures, real weapons are rarely used. Clearly, real weapons on a set are dangerous.

#### **Real Weapons**

- 1. Real weapons, which include and are not limited to, guns, knives, and swords, are not allowed on the set of any BC Film production.**
- 2. Non-Guns, disabled guns, or any guns that can fire any type of projectile are not allowed on the set of any BC Film production.**
- 3. Live ammunition, blanks, or anything capable of being fired are not allowed on the set of any BC Film production.**

### **Prop Weapons**

- Even a prop weapon can cause an unsafe situation. If the public is unaware that a movie is being made, it can cause a problem. Prop weapons are permitted within guidelines.
- Prop weapons are permitted in BC Film productions, but must be reported to your professor and the Office of Production and Safety.
- Prop weapons must be rubber, foam, or a toy, all which need approval from the Office of Production and Safety.
- Observe all applicable local laws when using prop weapons.
- The Office of Production and Safety must approve all prop weapons, which include guns, knives, and swords.
- When not in use, all prop weapons must be stored in a locked, secure space and must never be exposed when transporting.

- Notify neighbors and business in surrounding areas when prop weapons can be seen in public.
- If you have a prop that might be dangerous, you should consult your professor or the office of production and safety.

**For exterior shooting and any interior shoots that may be visible to the public, the use of prop firearms or weapons on set requires NYPD Movie/TV Unit assistance". For more information, please refer to:**

**<http://www1.nyc.gov/site/mome/permits/students.page>**

#### **On Set with a Prop Weapon**

- Only the prop-master or person designated person shall handle and be responsible for the prop weapon.
- You should never point the prop weapon at anyone or yourself.
- The props master will hold the weapon until the scene is ready to shoot.



- Right before the camera is turned on, the prop weapon will be handed to the actor.
- At “cut” the props master will retrieve the weapon.
- At the safety meeting, everyone working on the shoot must be made aware that there will be a prop gun in use, what crew and cast members will be handling it, and how it will be used in the scene. If the plan changes, hold another safety meeting to update cast and crew.

## Open Flames

The use of fire, which includes any open flame, constitutes a potentially hazardous situation on any production. Fire can be used, but must be handled in a controlled, safe manner.

The student's professor and the Office of Production and Safety must approve the use of fire on any BC Film production.

- There are no open flames permitted on campus.
- When an open flame is permitted, a crewmember must be designated as the Student Safety Officer. He or she will be responsible for keeping the flame under control.
- Fire pans and flame bars can be rented at a special effects house. If you have not been trained in the safe use of such devices it is necessary to have a trained, qualified professional to operate them.
- Any use of fire pans or flame bars must have permission from the Office of Production and Safety.
- A Safety meeting must be held when using fire on the set.
- Make sure there are fire extinguishers on set to handle any fire emergency.

- Additional ventilation is required when using fire on the set.
- Filming requires control. Fireplaces and campfires are usually fed by propane tanks, which enable complete shut down between takes, as well as regulation of flame height during the shot.
- Test the fire extinguishers before igniting any open flame.
- Be careful of loose clothing around open flame. Untreated fabric can ignite quickly and cause severe injury.
- In some situations the illusion of fire can be created with a lighting effect.

#### **Fire Safety**

- There must be posted exit signs, if there are no exit signs, the production team must post exit signs.
- Identify all overhead sprinklers and point them out to crew during safety meeting. Find out if they are in working order.
- Note the locations of all fire extinguishers.

- Note all escape routes and point them out to crew at safety meeting.
- Fire exits should always be accessible and never chained or locked.
- Never put anything in front of or behind a stairwell/fire exit door.

## **Special Effects**

Special effects can range from simple to complicated to dangerous. Proper care must always be taken when doing some kind of special effect.

- Pyrotechnics are not permitted on the set of any BC Film production.
- Squibs are not permitted on the set of any BC Film production.
- The Office of Production and Safety must approve all “live” special effects.

- All special effects must be reviewed by all participants prior to execution in order to help ensure that the effect is performed in the safest possible manner.
- Any special effect should be discussed at the safety meeting.
- Proper Fire Safety PPE must be used during all special effects production

### **Fog and Smoke**

The use of fog or smoke is highly toxic and even fog that is deemed acceptable can cause some people to have a physical reaction. If you are going to use smoke, you must inform all crewmembers and cast in advance so they may decide if they want to be part of that shoot.

- When smoke is created on an interior set, the set shall be periodically ventilated, or all personnel and animals shall be given a break away from the stage at appropriate intervals.
- When using smoke or fog effects, utilize the minimum concentration necessary to achieve the desired effect.

**The Following substances should NOT be used:**

1. Known human carcinogens including any particulates of combustion, including tobacco smoke (except when such smoke results from the smoking by an actor in a scene)
2. Fumed and hydrolyzed chlorides
3. Ethylene glycol and Diethylene glycol
4. Mineral oils
5. Aliphatic and aromatic hydrocarbons including petroleum distillates
6. Hexachloroethane and Cyclohexylamine

**The following substances may be used:**

1. Propylene glycol, Butylene glycol, Polyethylene glycol, and Triethylene glycol. Other glycol products should not be used (see above).
2. Glycerin products.

**Caution:** *Glycerin and Glycol should not be heated above 700 degrees Fahrenheit.*

The Production Safety Officer must review the Safety Data Sheet before using any chemical substances on the production.

Visit <https://www.osha.gov/Publications/OSHA3514.pdf> for more information about the Safety Data Sheet.

## **Stunts**

There is a wide range of action on the movie set that can be considered stunts. Depending on the action, stunts can be highly dangerous and more so if you don't know what you are doing. When performing a stunt, it might be necessary to have a professional stunt person on the set.

- Your professor and the Office of Production and Safety must approve all stunts.
- All stunts must be properly planned and rehearsed.

## **Boats and Water**

Boating, like filmmaking, offers unique challenges each time you go out. When the two come together, safety must be at the forefront when planning a shoot.

### **Working on or in Water:**

- The Office of Production and Safety must approve all student productions shooting on any watercraft.
- The Office of Production and Safety must approve all water and underwater shooting.
- All cast and crew working on or near water must wear life vests.
- A safety meeting must be held at the beginning of the day to go over safety issues while working on the water.
- The cast and crew must be notified in advance of all boat and water shots.
- Producers must research the potential safety issues in the body of water where they are shooting, such as swift currents, waterfalls, thick underwater plant life, rocks, etc.
- Discuss emergency procedures.



- No students shall be pressured to work on water if he or she cannot swim, or is not comfortable in that situation.
- When using any watercraft, you must be aware of load and rider capacity limits. Only required personnel should be on the watercraft. All others should remain on land.

**Boarding:** Stand clear of the boat and dock edge during docking procedures. Do not attempt to board until the watercraft is securely tied to the dock and a member of the boat crew gives the command to board.

- Never under any circumstances place arms, legs, or other body parts between the boat and dock or between two boats.
- When boarding, only a designated boarding area or device shall be used. Do not step over rails, gunwales (side of the boat), or lifelines.
- Do not block access to the watercraft's cleats or emergency access hatches. If you are unsure where to stow your gear, ask one of the watercraft crewmembers.

**Once on Board:** Keep one hand available at all times to hold onto the watercraft or it's railing.

- Operation of valves, switches, etc. is to be performed only by watercraft crewmembers.
- No one should straddle the gunwale or sit with their legs dangling off the side of the boat.
- Bring a hat for shading, sunglasses, and sunblock.

## **Animals**

All BC Film productions must follow the American Humane Association Guidelines for the protection of animals in films.

- A copy of the guidelines can be obtained from the organization.  
(<http://www.americanhumane.org/assets/pdfs/animals/pa-film-guidelines.pdf>)
- The Office of Production and Safety must approve all wild or exotic animals (including reptiles) used in a BC Film production.
- When shooting domestic animals, you must notify your professor.

- All animal stunts and/or potentially dangerous animal action used in a BC Film production must be approved by your professor and the Office of Production and Safety.
- Animals are unpredictable. When animals are used on productions, the animal handler must meet with cast and crew at the safety meeting at the beginning of the day and inform them of the safety procedures in effect and answer any questions.
- Do not feed, pet, or play with an animal without permission and direct supervision of the animal handler.

**Live animals are not permitted on the premises of the Brooklyn College campus.**

## Specialized Equipment

Using specialized film equipment often requires special training.

- Students are permitted to use specialized equipment upon approval from their professor and the Office of Production and Safety.
- There must be a trained, certified, and qualified person to operate the equipment.

**The following is a list of specialized equipment. Any specialized equipment that is not mentioned below also needs approval by your professor and the Office of Production and Safety:**

### **Aerial Lifts**

- There must be a trained, certified, and qualified person to go up in any aerial lift.
- Training on the aerial lift in the Sound Stage does not constitute training to use an aerial lift on location.

### **Cranes**

- All cranes must have approval of your professor and the office of Production and Safety.
- Crane operators must have trained, certified, and qualified operators.

### **Steadicam**

- You need to have special permission to use the Steadicam. Students need to be trained in advance. If you have any questions about the Steadicam, contact the Equipment Center.
- To take the Steadicam, if available, out of the Equipment Center, you must be trained and complete the 20-hour workshop.
- All cinematography students can take the 20-hour workshop. By taking the workshop in advance, you will have time to practice, which will make you better prepared for the class.
- It is necessary to have assistance when working with a Steadicam. An assistant cameraperson assists with the rig and have a separate spotter who spots the Steadicam operator.

### **Gimbals**

You need to have special permission to use the gimbal. Students need to be trained in advance. If you have any questions about the gimbal, contact the Equipment Center.

- To take the gimbal out of the Equipment Center, your production must include a trained, certified, and qualified gimbal operator.
- Gimbals should only operate under the load capacity, which they are designed.
- Gimbal Operator needs a clear line of sight and a spotter to assist.
- Ensure crossovers and/or protective covers are used to protect hoses, electrical cables, and control lines and to prevent possible tripping hazards.

### **Drones**

Any aerial shooting using a drone/sUAV (small unmanned aerial vehicle) presents significant challenges and brings up major concerns when it comes to safety. There are limited circumstances when it is permissible to use a Drone on a BC Film production.

- The Office of Production and Safety must pre-approve all Drone shots.
- When using Drones you must have someone who is trained and **authorized to operate UAS for civil purposes other than for recreation or hobby by the FAA.**
- Keep your Drone within line of sight.
- The operator must discontinue the flight when continuing would pose a hazard to other aircraft, people or property.
- Don't fly in NOAA zones and obey all TFRs/FRZs (Temporary Flight Restrictions/Flight Restricted Zones).

#### **Generators**

- Permission to use a generator must be given by your professor and the Office of Production and Safety.
- Large generators must have a trained, certified, and qualified operator and must be approved by the Office of Production and Safety.

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## Safety Common Sense

- The first rule of safety: If you don't know, then ask.
- If you ever have a question about safety contact the Office of Production and Safety.
- Safety begins long before the shooting day. It is the responsibility of each crewmember to educate themselves about safety and to arrive on set on time, well rested, and healthy.
- Accidents are caused by negligence, lack of awareness, and lack of foresight. It is important to stay alert, understand the potential dangers, and be able to recognize the safety hazards in advance.
- Follow your instincts. If it feels unsafe, it probably is.
- If you think something is unsafe or someone is acting in an unsafe manner, say something. By calling attention to the safety hazard, it gives the director, producer, or DP a chance to reevaluate the situation.



- Safety is no less a concern on **small sets**. Even on a two-person shoot, common sense and caution must be exercised at all times.
- Safety should be the first concern of every crewmember involved in any film shoot.
- Everyone wants to make a good movie, but no shot is worth risking the injury or death of anyone involved.

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Brooklyn College  
Film Department