TOWSON UNIVERSITY | Electronic Media and Film

Set Safety Handbook

Updated Summer 2025

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TU Police Department: 410.704.4444
EMF Office: 410.704.3184
EMF Production Labs: 410.704.2592
Website - towson.edu/emf

Welcome to the EMF Set Safety Handbook!

Safety is a priority within the film and media industries. Effective set safety measures reduce the numbers of injuries, increase the productivity of your day, facilitate workflow, and enable more open and effective communication between departments. This document emulates official industry handbooks released by production companies and unions to inform and protect their workers, and was adapted for student-level productions to offer simple measures to ensure the safety of your crew.

Table of Contents:

A Note Before We Begin	3
What to do in case of an Emergency?	3
Civility Code and Discrimination	3
Reporting Sexual Harassment	4
Resources for Mental Health	5
The Basics of Set Safety	5
The Role and Responsibility of Set Safety Officers	6
What are the most common accidents on set?	7
Intimacy Coordination and Consent	8
Notes for Call Sheets	9
First Aid Kit and Personal Protective Equipment (PPE)	10
General Set Etiquette	12
Scheduling and Sleep Deprivation	14
Location Scouting	15
Permitting and Filming Notices	16
Location Management Concerns	17
Working from Heights and Ladder Safety	18
Craft Services and Catering Responsibilities	19
Weather and Time of Day Concerns	20
Other Environmental Hazards	24
Fire Safety	24
Proper Lifting Technique	25
Grip and Electric Basics	26
Basic C-Stand Etiquette	29
Audio and Studio Concerns	29
Stunts and Special FX	30
Weapons/Firearms	30
Camera Cars and Driving	31
Working with Minors on Set	32
Insurance – From the Employee Safety Program	33
Safety Equipment Recap	34
Additional Resources	35

A Note Before We Begin

This document cites industry handbooks and case studies as key resources, as well as mentorship and insight from faculty, staff and industry connections. However, no set safety manual will ever be able to capture all of the information needed to ensure a safe set.

It is the responsibility of each individual to communicate and work together with their crew to prevent accidents. Students will often vary in experience level based on their prior knowledge and class standing. Respectful communication and mentorship are therefore necessary to enabling safe sets.

If you are not trained on how to use a specific piece of equipment, if inclement weather is approaching, if your body is telling you it is running out of energy… stop, and communicate your needs to your fellow crewmembers. In doing so, you create a safe working environment not only for yourself, but your fellow cast and crew.

What to do in case of an emergency?

Safely stop work and address the immediate problem at hand.

1. If someone has a life-threatening injury, do not hesitate to call 911.
2. If an injury needs attention, but is not life threatening, seek medical attention at a hospital emergency room. If you are not sure of the seriousness of the injury, do not hesitate to take the injured person to the hospital immediately.
3. Keep copies of all police and/or hospital reports and bills for hospital visits.
4. Above all, finishing your day of filming is never worth risking your life or increasing an existing injury.

Civility Code and Discrimination

Towson EMF film sets are an extension of the classroom, and therefore fall under COFAC's Classroom Civility Code[1]. Film sets are a safe space and an opportunity for us to collectively foster an inspiring, productive and creative community environment. The expectation is for us all to practice humane, ethical, professional, and civil behavior in all interactions.

The department of Electronic Media and Film places a priority on learning. We value the inherent worth and dignity of every person, thereby fostering a community of mutual respect. Students have the right to a learning environment free of disruptive behaviors. Faculty have the right to define appropriate behavioral expectations on set and expect students to abide by them. Staff have the right and responsibility to define appropriate behaviors necessary to conduct any university activity free of disruption or obstruction.

[1] Full text of the "Civility Code" is available at:
https://www.towson.edu/cofac/departments/mediafilm/resources/documents/civility.pdf

TU is dedicated to creating a diverse space free of judgment, fear and prejudice, and to strengthening our continued efforts to fight hate and bigotry. Acts of destruction or violence which are motivated by animosity against a person or group because of race, color, religion, sexual orientation, gender, disability, national origin, or homelessness, or which infringe on the rights and freedom of others will not be tolerated at Towson University.

To foster a safe and inclusive campus, the University will investigate and respond to all reports of hate crimes and bias incidents. In order to prompt an investigation, the incident must be reported. If you have been a victim, or have witnessed or learned of a hate crime or bias incident, you can file a report using the Hate Crimes & Bias Incident Report Form at https://towson-advocate.symplicity.com/public_report/.

Requests for an accessibility accommodation or the reporting of an accessibility-related incident can be filed by e-mailing oiie@towson.edu.

In case of emergencies, contact 911 or TUPD at 410.704.4444.

Reporting Sexual Harassment

Towson University is committed to ensuring a safe, productive learning environment. The university does not tolerate sexual misconduct, including harassment, stalking, sexual assault, sexual exploitation, or intimate partner violence. This applies to student behavior both on set and during off-campus interactions.[2] There are resources available if you or someone you know needs assistance. You may speak to a member of university administration, faculty, or staff, but keep in mind that they have an obligation to report the incident to the Title IX Coordinator.

Title IX offers a platform for making reports about sexual violence and misconduct at https://towson-advocate.symplicity.com/titleix_report/ . They can also can be reached directly at 410.704.0203. You may submit a report anonymously. If you do so, please understand that their ability to respond to the incident is extremely limited. If a non-TU affiliate engages in unacceptable sexual conduct or sexual harassment, please report to local law enforcement, the employer, as well as the Title IX office. While Towson University has no jurisdiction to investigate the conduct of non-TU affiliates, the Department may opt to terminate relationships with off-campus partners for violation of Title IX. In case of emergencies, contact 911 or TUPD at 410.704.4444.

Know that any information shared with the Title IX office will be kept private to the greatest extent possible. If you want to speak to someone who is permitted to keep your disclosure confidential, please seek assistance from the TU Counseling Center, who can be reached at 410.704.2512. Your instructor is always available to talk to or seek advice from.

[2] Full text of the "Policy on Sexual Misconduct" is available at: https://www.towson.edu/about/administration/policies/06-01-60-sexual-harassment-sexual-misconduct.html

Resources for Mental Health

Film production is a physically and mentally demanding industry. The long hours of film production can challenge your other academic, work, and life responsibilities for time management. Check in with yourself, your faculty, and your fellow crewmates often.

If you or a fellow student is going through a personal crisis that is interfering with your academics, the Counseling Center can help you in several ways. They can help you to feel better, to recover more quickly, and return to a productive life at the university with fewer problems. The Counseling Center can be reached at 410.704.2512.

At times, members of our community find themselves or others in need of additional support and assistance in order to thrive on campus. The university's Division of Student Affairs coordinates support resources that assist students in being successful academically and in promoting their health and well-being. Anyone who feels a student is a threat to themselves and/or the community, or who may need additional or atypical resources, can make a referral, including students, faculty, staff, and other community members: https://www.towson.edu/studentaffairs/student-outreach-support/faculty-staff/

You do not have to make the determination of whether other departments are more appropriately suited to handle these concerns. Call the Office of the Vice President for Student Affairs (VPSA) at 410.704.2055 or submit a Student Outreach and Support (SOS) form at https://towson-advocate.symplicity.com/care_report/.

In case of emergencies, contact 911 or TUPD at 410.704.4444.

The Basics of Set Safety

Set safety begins in preproduction – from scripting to location scouting – and carries through until your final screenings. The long hours of film production, on top of the physical and mental stress, can quickly become taxing. **Doing something quickly to meet the needs of production should NEVER come at the expense of safety. If safety is being sacrificed, a larger conversation about scheduling and production logistics needs to take place.**

Any unsafe conditions or activities discovered in the workplace ***must be corrected*** as soon as possible. All crewmembers must be trained in basic safety, and anyone whose job requires special equipment or procedures must receive specific training in those areas. Film is largely an apprenticeship model, by which mentorship, shadowing, and regular check-ins are necessary for getting all crew members up to speed. Therefore, crew should be encouraged to ask questions and admit when they don't know things or need help. This includes reaching out to your professor during your off-site production and not drawing conclusions on your own. Another example is to speak up when you are injured or when you don't feel qualified to do a certain task. The film industry has historically been a place of bravado and a "fake it till you

make it" mentality that puts you and others at risk. We hope that you enter into a lifelong career in this industry, balancing the mental and physical tolls this can take. By noting your concerns and communicating to others your needs, you take part in changing the culture of the industry.

Each production day should start with a safety meeting led by a single voice – the Set Safety Officer – who is typically your Assistant Director (AD) or Producer. These safety meetings should pertain to any new or unique situations that will arise during the day: new equipment, new crew, potential weather events, new lines-of-communication or changes in set hierarchy, changes to the schedules or previously established plans, location moves, actor's needs and concerns, the presence of minors on set, stunts, special and/or practical effect's hazards, general location information (locations of bathrooms, exits, etc), and location hazards (working near a live street, poison ivy, etc).

If new cast or crew come on to the project throughout the day, make sure that the safety meeting information is communicated to them before they are allowed to work.

The Role and Responsibilities of Set Safety Officers

Considering the vast differences in crew sizes on student productions, not every crew will have an Assistant Director (the role typically responsible for Set Safety), or a Producer, or these roles will be shared among other crew members. For this reason, each set should appoint a Set Safety Officer who has been or will be on the project from preproduction through until the end of production. Depending on crew size, this role may be the director themself!

Typically, you want your Set Safety Officer to be the person responsible for making call sheets, who will be on set every day, who knows the project and its cast, crew, and locations intimately, who can communicate well and promptly, and who is respected among the cast and crew.

The roles of the Set Safety Officer include, but are not limited to:

1. Attending each location and tech scout to note the safety concerns. They will then include this information on call sheets or communicate it to the crew member making the call sheets.
2. Lead safety meetings at the start of each production day.
3. Assist in communication between departments. Does everyone know the day's schedule and plan?
4. Note every cast and crew member's dietary needs and allergens to communicate to catering and craft services.
5. Provide and make accessible water, food, and medical supplies during production days if a caterer or craft services are not on the crew.

What are the most common accidents reported on set?

OSHA reports that the most commonly reported accidents in the workplace, in order, are:

1. Slips, trips, and falls.
2. Being struck by an object.
3. Being crushed under objects.
4. Shocks and burns.
5. Cuts.
6. Splashes in the eye.
7. Reactions to Fumes.
8. Exhaustion and fatigue, especially related to heat/cold.

Our job as set safety-minded students is to be aware of these common risks, mitigate them, and take preventative measures.

Intimacy Coordination and Consent

Intimacy Coordinators are professionals who are responsible for helping performers and productions navigate highly sensitive scenes, such as those that feature nudity and simulated sex. However, the role was also created to advise production personnel on navigating safety and consent situations when they impact physical and mental health. This may include things such as: serving as the liaison between actors and director because of the inherent power dynamic between these roles, navigating simulated sexuality or violence on set, and addressing consent and comfort level at all stages of production. SAG-AFTRA believes that implementation of these standards and protocols will allow productions to run more efficiently, provide a safety net for performers, and establish specialized support that empowers both cast and crew.[3]

Consent is defined as an agreement between individuals to engage in an activity. Two key aspects of consent are that clear communication is maintained and is continual throughout the agreed-upon activity, and that consent can be revoked at ANY time.[4]

Student sets may not be fortunate to have professionals trained in Intimacy Coordination on set with them, but it is important to understand the role and to work to implement these strategies when working on student productions.

[3] https://www.sagaftra.org/contracts-industry-resources/workplace-harassment/intimacy-coordinator-standards-protocols
[4] https://www.rainn.org/articles/what-is-consent

Intimacy Coordinators are responsible for advising on:

- Understanding of Guild and Union Contracts that affect nudity and simulated sex.
- Navigation of on-set culture and understanding of on-set etiquette.
- Movement and Safety in facilitating the physicality of scenes.
- Anti-Harassment.
- Gender and Sexual Diversity or Sensitivity.
- Movement coaching and masking techniques.
- Consent.
- Communication.
- Bystander Intervention.
- Power Dynamics
- Mental Health First Aid/Trauma.

During Pre-Production, an Intimacy Coordinator is responsible for:

• Meeting with the producer/writer/director at a minimum, to discuss details of script breakdown and intimate scenes. To what degree of nudity or violence do we see? What are the specifics of the scene?
• Ensures clear communication with actors regarding any nudity, simulated sex, hyper-exposed situations, and violence.
• Meets one-on-one with performers prior to the rehearsal and filming of these scenes and confirms consent for the descriptive language to be used and any other considerations for the filming of the scene.
• Ensures continued consent during the rehearsal process.
• Facilitates resolution of any discrepancies in agreements or expectations between actors and productions.
• Communicates and, as needed, collaborates with departments such as assistant directors, costumes, props, and makeup to ensure that the performers are provided with appropriate nudity garments, barriers, and prosthetics to reflect these pre-production consent considerations.

During production, an Intimacy Coordinator will:

• Review pre-production consent considerations, scene content, modesty garments, and barriers with performers, directors, and assistant directors.
• Ensures the proper implementation of closed-set protocols and SAG-AFTRA Guidelines.
• Serves as a resource for directors and assistant directors (as needed) with any specialized movement or choreography to ensure consent and safety while enhancing believability and director's vision.
• Ensures continued consent throughout the filming of the scene (both consent to what their likeness is seen performing, and how the action is achieved) while minimizing interference in production flow.
• Protects minors, consistent with SAG-AFTRA Guidelines.

Finally, in post-production, the Intimacy Coordinator will:

• Be available for support post-filming, if performers have questions or concerns.
• May verify that a final cut is consistent with the agreed-upon standards set by the actors and director.

Outside of the relationship between directors and actors, other departments such as audio, wardrobe, and hair and makeup may have a need to touch actors, such as when micing talent, making sizing adjustments, or applying special effects. **These roles require clear communication and clear VERBAL consent for their on-set working relationship.** Student crew should first explain why they need to touch the actor, stand-in, etc, and then to ask when, where, and how they may touch the individual as it relates to the task. The student must receive clear, verbal, positive consent to continue the action. Again, the person being touched may revoke consent at any time, for any reason.

A common example of this interaction may be when the audio department must mic their talent with a hidden lavalier microphone. The student should advise the talent on how and why the microphone will be used, and ask if they may place the mic themselves, or if they may work with the talent to place the microphone on their person. The talent may be more comfortable micing themselves, given clear direction on how to do so, or they may express that they are comfortable being touched up to a certain extent, such as a desire not to be touched at the lower back or the neck.

In cases like this, the student may mic the talent up to the point where the actor is comfortable, at which point the actor then takes over and finishes micing themselves, adhering the microphone to their collar at the neckline or placing the transmitter in the waistband of the lower back, with direction from the student. Again, **all situations are fluid and dependent on clear communication and positive, verbal consent from all parties at all times.**

Lastly, it is important to ask and note any skin conditions, allergens, or personal preferences that may cause a physical or mental reaction from all cast and crew and to come up with action plans for how to address them. Examples may include allergens in latex or adhesives related to special effects makeup or audio expendables, or an actor's personal desire not to be exposed to flashing lights or atmospheric fog. Ideally, these questions are asked and alleviated during pre-production.

Notes for Call Sheets

Call sheets are a "blueprint for the day" that is sent to all cast and crew. A call sheet typically has the addresses of ALL filming locations for the day (including the "production office" or headquarters if different), a schedule for the day, call times, and the names and cast/crew positions for all personnel. If necessary, they will include a location map showing parking areas, staging areas, and filming areas.

A call sheet should include the address and phone number of the nearest hospital emergency room and pharmacy. Walk-in clinics are not satisfactory – a hospital ER offers services that walk-in clinics are not capable of.

The call sheet should include the projected weather forecast and "safety bulletins" for any potential hazards. Are we filming a fight scene this day? Is it going to be particularly hot? Note the pitfalls of what the crew should expect and how best to prepare for them.

Call sheets should be emailed to your cast and crew at a ***reasonable time before your shooting day*** (not at midnight the night before a 6 am call time). This is typically at least 12-24 hours before production. Physical copies should be available on set as quick hand references.

First Aid and Personal Protective Equipment (PPE)

Students are responsible for purchasing a standard First Aid Kit that is kept in a known, accessible place on set at all time. It's highly recommended that the kit contain an assortment of the following:

- Emergency First Aid Guide
- Absorbent Compresses (of various sizes)
- Adhesive Bandages (of various sizes)
- Sterilize Gauze Pads (of various sizes)
- Wraps, Various Sizes (for securing bandages or wound dressings in place)
- Tourniquet
- 1 Breathing Barrier (with one-way valve)
- Adhesive Tape
- Antibiotic ointment
- Antiseptic Wipes
- Instant Cold Compress
- Disposable Gloves (non-latex)
- Tweezers
- Scissors
- Eyewash Kit for particle debris
- Hydrocortisone Ointment (topical for allergic reactions)
- Aspirin and/or Ibuprofen (pain relief and inflammation reduction)
- Antacid (heartburn and indigestion relief)
- Benadryl (antihistamine for allergic reactions, will cause drowsiness.)
- Bug Spray (Being mindful of potential allergic reaction)
- Sunscreen (at least 30 SPF, mindful of potential allergic reaction)

If you'd like, Towson's Office of Public Safety offers emergency medical training through its "Make It" training course. The course trains civilians on how to treat themselves and others while waiting for help. You will learn to identify life-threatening injuries and learn ways to treat them without emergency medical equipment.

Anyone can register for classes, which are given throughout the semester:
https://www.towson.edu/publicsafety/emergencies/preparedness/

Students are responsible for purchasing an ABC Fire Extinguisher if working with a generator, when working at on-location sets, or when working with or around sources of flames. ABC Fire Extinguishers release a powder that smothers the three most common classes of fire: trash/wood/paper, liquids and gases, and energized electrical sources.

Never pour water on a grease or electrical fire. The fire extinguisher should be in a central location known to all crewmembers on set, and its presence and availability should be covered during the set safety meeting. If working with a generator, the responsibility of the fire extinguisher should belong to the electrical department. When working with fire, the responsibility of the fire extinguisher should belong to the effects department. If these individuals do not feel comfortable with this responsibility, then it should go to a reliable person on set who is comfortable and who is noted on the call sheet.

Personal Protective Equipment (PPE) is any equipment that serves the purpose of protecting the individual in certain environments or under certain conditions. In general, all cast and crew members should expect to dress appropriately for the environment and weather of the day, and these details should be communicated by your Set Safety Officer. Everyone should have access to a pair of well-fitting gloves and be mindful of their clothing. Closed-toe shoes with substantial tread patterns must be worn at all times. Note that crocs and heels, while technically closed-toe, can create other risks, and shoes with worn treads can reduce friction and cause slips and falls. Film sets can tend to get cramped for space and the nature of equipment can poke, prod, and scratch easily. Wear clothing that will keep you covered (as appropriate for the weather conditions) and not get hooked or caught on things easily. Avoid polyester and other flammable fabrics. Long hair, scarves, and jewelry must be secured appropriately.

Additional PPE may become necessary – such as high visibility vests (for working around roads, cars, or at night), hard hats, steel toe shoes, safety harnesses for fall protection, safety glasses, hearing protection (anything over 85 dbs), respirators or dust masks, headlamps or wearable flashlights, all of which can be commonly found at major hardware stores. It is the Set Safety Officer's responsibility to have these items accessible to his or her production crew when needed.

Cold weather gear may include multiple layers of clothing. Given the "hurry up and wait" nature of filmmaking, you will appreciate having layers that you can put on and take off as your body heats and cools. Despite having heavier winter options, you may also want breathable

clothing options that don't trap sweat against your body, which can result in rapid cool down and discomfort in the cold. Ventilate as needed.

Half of your body heat is lost through your head and neck, so keep them covered as much as possible. Wool clothing is best for heat retention, followed by synthetics. Cotton is a bad choice for insulation because it retains moisture.

Blankets, hand warmers, and portable heaters are all welcome additions to a cast and crew staging area! Never leave a portable heater unattended – they should only be used by trained operators. A fire extinguisher should always be nearby when using a portable heater.

Hot weather gear tends to be lightweight, breathable fabrics that cover and protect the body from the sun, and which will wick sweat off your body. Long and billowy clothing, while comfortable in the heat, may get caught on production gear and pose a risk. Closed-toe shoes are a must – absolutely no sandals or flip-flops.

Rain gear is a highly encouraged purchase. A lightweight rain jacket and rain pants that can be pulled over existing clothing, and waterproof shoes with substantial tread for additional traction in slippery conditions, can turn any rainy day into a more pleasurable experience. Having multiple additional umbrellas and ponchos available for the production crew is appreciated.

We will cover additional weather and rain concerns as they apply to the body and gear in a future section.

General Set Etiquette

Here is a short list of tips for general set etiquette that are used in every department and apply to most all environments.

1. When carrying equipment, be sure to warn other crew members that you are on the move. You may be carrying heavy equipment, have limited visibility, or risk damaging crew or the location, especially when on stairways or going through doors. Call out "POINTS COMING THROUGH" or "WATCH OUT" to alert other people to your presence. It may be worthwhile to check and clear your entire path of hazards before proceeding. Any additional Production Assistants should help hold doors, clear the way of people or furniture and repeat "equipment coming through." Remember that filmmaking is a team effort.
2. Stage equipment safely and securely on level surfaces. Never block doorways or exits with gear, and always create several feet of space for paths of mobility through your set. These are your "fire lanes." Two people should be able to pass one another comfortably at all times.

3. Organize your gear by departments at the start of the day, and keep them partitioned and orderly throughout the day as you use equipment. This will facilitate a quick working day and an easier load-out.
4. Location sets have a variety of hazards to be mindful of. Keep lighting units away from sprinkler heads and smoke detectors, and never disable them. Consider protecting your set walls, floors, and ceilings with layout board (sheets of cardboard, sound blankets, drop cloths, etc) before you bring in equipment. If your stands are missing rubber feet, or you have a particularly delicate location, cover your stand legs with rubber crutch tips or gaff tape to avoid damaging the floors. Paint, vinyl siding, plastic surfaces, and various other home facades may melt when exposed to the direct heat of a movie light. Clean dirt, sand, mud, and water off of equipment before packing it away.
5. Do not leave liquids and trash around the set, especially the active filming location. Do not ever leave coffee, water or food on carts, equipment, or a working set. You could destroy the production design, the equipment, or the location. A coffee cup famously ended up in the final season of Game of Thrones and had to be digitally removed later. Your art/props department and script supervisor should keep an eye on continuity as a failsafe.
6. Always announce when “house lights” (lights for visibility that are not production-related) are going to be turned off or on. Never leave your cast and crew in full dark without announcing previously. When turning on a light, make sure to announce “STRIKING,” “FLASHING,” or some variation of “AVERT YOUR EYES” to notify the crew that a light is coming up.
7. Announce “CROSSING” when passing in front of the lens. Hold all work during blocking rehearsals and takes and never cross in front of the lens during these times.
8. Never borrow equipment from other departments without asking first. Let them know if things need to get bumped or moved in emergency situations as soon as possible.
9. Absolutely no alcohol or drug use on set. It is the responsibility of the crew member to notify their Set Safety Officer if they are taking a medication which may interfere with their ability to work safely. If a scene calls for alcohol or drug use, students should consult with their faculty member regarding the appropriate usage of prop items.
10. If hand or power tools need to be used for any reason, they should be operated by qualified workers. Ensure that all equipment is in proper working order and all protective guards are in place. Speak with others in your department if you are unfamiliar with the equipment, have any questions or feel that you need additional training. Establish a “lock out/tag out” policy for the use of specialized equipment. This means that when not in use, or if being repaired, the equipment is made inoperable and must be checked out with authorized persons.

Scheduling and Sleep Deprivation

The film industry has increasingly taken seriously the long and oftentimes dangerous working hours that film schedules can demand. Almost 20% of all car crashes and injuries are associated with sleepiness.[5] Furthermore, after only 17 to 19 hours without sleep, the body's mobility impairments are equivalent or worse than those of a blood alcohol concentration level of 0.05 percent.[6] The Haskell Wexler documentary "Who Needs Sleep" [7] covers this topic extensively, after an assistant camera operator died driving home from set after working a 19-hour day on the set of "Pleasantville."

The assistant camera operator's death led to an industry-wide push for a 12-hour on/12-hour off rule. That means a 12-hour working day, and then 12 hours off work. 10 hours is the absolute minimum required "turnaround" time for the crew to be able to obtain the necessary sleep. Keep in mind when scheduling that your turnaround time needs to be inclusive, not just of sleep, but also of your cast and crew's ability to commute, eat, shower, and return to normal life.

When doing a switch from day work to night work (one or more days of nighttime sets back-to-back), you must buffer the transition with a 24-hour break to allow your cast and crew to reacclimate to the new schedule. Try to block all day and night shoots together because of this.

Students should consult with their classmates and faculty members to finalize production schedules and ensure that they are safe and reasonable for all involved. It is advised to plan for some flexibility and buffer room for delays in production.

You may have to ask your crew to commute long hours or distance to and from set. These additional hours should be factored into the schedule of the day. The International Association of Theatrical and Stage Employees (IATSE) says that travel beyond 25 miles is considered a "distant location" and must be accommodated accordingly in your turnaround time.

Sleep deprivation may be caused by factors other than an extended workday. The Automobile Association of America (AAA) cautions drivers to observe the following danger signs of sleep deprivation, both before operating a vehicle and should they arise while operating a vehicle:

- Eyes closing by themselves.
- Frequent yawning.
- Excessive fatigue
- Irritability
- Forgetfulness
- Difficulty paying attention
- Difficulty concentrating
- Depressive Mood
- Swerving in the lane

[5] National Center for Biotechnology Information.
[6] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1739867/pdf/v057p00649.pdf
[7] http://whoneedssleep.weebly.com/

Drivers experiencing any of these danger signs could fall asleep at any time. The AAA recommends three basic solutions: sleep, exercise, and caffeine. Drivers should pull off the road to a safe area, turn off the engine, remove the keys from the ignition, move to a passenger seat, lock the doors, and take a nap. Even 20 minutes will help. Upon waking, the driver should get some exercise and consume some caffeine for an extra boost. Be even more mindful of this routine in poor weather conditions – you should never sleep in your car with the ignition on, or in particularly hot or cold weather. Seek an alternative rest area, such as a hotel, instead.

Anyone who believes that they are too tired to drive should notify the Set Safety Officer or a Producer before leaving the set. The Set Safety Officer should work with the individual to find an alternate means of transportation or provide a rest area. Such requests should be made without any fear of reprisal or disciplinary action. When production anticipates an extended workday, crewmembers should be encouraged to carpool. Multiple passenger vehicles driven by well-rested, designated drivers should also be considered.

Location Scouting

Students will submit their scripts to faculty for approval. Students should consult with their faculty member about concerns and logistics related to securing locations and planning shooting schedules.

The most important question asked of production during the location scout is not whether the location accurately fits the script's needs, but whether the location is safe for a large group of people, heavy equipment, and the inevitable sprawl production will take up. Your film production will not only need the physical footprint of the "working set," but will also need staging for equipment, changing rooms, and staging areas for actors, space for craft services and catering, etc. If anything needs to be moved to help accommodate the space needed for production, you must not block doorways and entrance/exit pathways and you must maintain at least a 4-foot "fire lane" to all exits.

In addition, students should remain mindful of how their set will affect the "neighbors" of production. Does your script have scenes of simulated violence or sexual situations that could cause alarm for neighbors? Will voices be raised or loud music played? Do parking concerns need to be addressed? Notifying those neighbors affected beforehand will help your set from being interrupted and reassure those who may be worried.

Location scouts offer the best opportunity to get out ahead of potential delays and hazards such as these. A location scout maximizes your filming day and provides the safest working environment, enabling efficiency and comfort in your production workflow.

Everyone is responsible for looking for safety concerns during their tech scout, but it's primarily the role of the Set Safety Officer. The Gaffer, Location's Manager, and other department heads will also be critical for discussing their respective departments' needs and voicing these at all safety meetings.

Additional location considerations include:

1.) Are the power requirements at the location safe and sufficient for your needs? If a generator is necessary, can it be run outdoors, safely and securely, with proper ventilation?
2.) Can you enter and exit the location quickly? Is there an alternative exit? How long will your load-in and load-out take?
3.) Can you safely park and safely load and unload vehicles at this location?
4.) Are there sprinkler systems, smoke detectors, carbon monoxide detectors, fire alarms, etc.? Disabling any of these systems is unlawful and extremely dangerous.
5.) Is there access to bathrooms, clean running water, trash and recycling facilities? If not, are there reasonable solutions to their absence (bringing in portable toilets and water stations, acquiring bathroom rights from a neighbor or nearby business, taking trash off-site)?
6.) Where are rubbish, refuse, abandoned materials, broken glass, scrap metals, discarded needles, other waste or overhead utility/electrical lines that can create a potential physical hazard? How can these risks be mitigated?
7.) Does the location have poisonous plants present (poison ivy, etc.)? Does the location pose a risk for pests like mosquitoes and/or ticks? Mitigate these risks with your safety meeting, advising, and call sheet bulletins.

Permits, Release Forms, and Filming Notices

While not every location may require a permit, every location needs to secure a location release. Students are required to obtain location releases and permits PRIOR to filming.

The Producer has the responsibility of not only obtaining the permits necessary for filming, but also communicating the stipulations of the permit to their crew. These may include designated parking areas, noise restrictions, and personnel capacity, among others.

When filming in busy community areas (residential neighborhood, city street, park, etc,) proper notification is to be provided to the local businesses or neighbors who may be directly affected by the production PRIOR TO YOUR FILMING DAY. Key concerns may include parking and staging areas, need for silence (if required), notification of stunts or effects work, etc.

The filming notice should include:

- Towson University Department of Electronic Media and Film Affiliated Project
- Name of the production
- Type of activity and duration (i.e., times, dates, including prep and strike)
- Company contact (Location Manager, Producer, Assistant Director)
- Safety Bulletins (Sidewalk closures, Simulated Violence, etc).

It's advised that you remind immediate neighbors of potentially disruptive subject matter during the day of filming. Will your scenes include raised voices, screaming, fight sequences, and weapons? This good-faith gesture will keep your production from being interrupted and offer peace of mind to those concerned. Limit your disruptions to neighbors as much as possible. If needed, have your Location Manager or a designated Production Assistant notify neighbors and regularly check in for when noise or disruptions will start and stop throughout the day so everyone can plan accordingly.

Keep in mind that these types of company contacts are serving as "Public Relations Officers," not only for your project and as a representative of EMF and Towson University, but also as a representative of the global filmmaking community. The conduct and behavior of yourself and your crew reflect on the entire industry, and could make or break relationships with crews to be able to film on location in the future. Be respectful, kind, and professional. Being excited about your project is a plus. Most importantly, be a good communicator and honor the verbal and written agreements you make.

Location Management Concerns

When any production goes on location, a plan to properly maintain and protect that location must be in place. Management of the location falls to a designated crew role called the "Location Manager."

The Location Manager, alongside the Set Safety Officer, Assistant Director, and PAs, should plan to arrive on set 30 minutes to an hour before everyone else to begin setup. They will help inform and manage those arriving. Work with your AD to determine how many crew are essential for this setup time. If applicable, the Location Manager and PAs should erect signs for filming purposes (filming notices, designated parking areas, directions to set, etc) before arrival to notify neighboring houses and businesses. Remember to remove these signs at wrap.

Production vehicles arriving on location should not enter the area before the time stipulated in your permit or call sheet, and park one by one, turning off engines as soon as possible. Cast and crew shall observe designated parking areas. Do not block non-production vehicles in, or block driveways without the express permission of the municipal jurisdiction or driveway owner.

Extensive, detailed photographs should be taken before any crew members or equipment are allowed to enter the location. These photographs are to show the existing condition of the location from floor to ceiling and the positioning and condition of all of the furnishings, including furniture, art objects, and wall hangings. Be careful to note any existing damage to the location with the owners. Keep in mind that photographs taken during the location scout are not sufficient because the condition of the location may have changed since the scout; They should be photographs from the same day.

Any furnishings that must be moved should be properly protected using materials like bubble wrap, furniture blankets, tissue paper, cardboard, etc., and moved to a safe storage area that is out of the way of the production. Likewise, walls and floors should also be properly protected against film equipment and heavy foot traffic. If necessary, place crutch tips, gaff tape, sound blanket, or cardboard underneath stands. Be mindful of tracking dirt.

Do not trespass onto other neighbors' or merchants' property. Remain within the boundaries of the property that has been permitted for filming. Individuals should eat within their designated meal area during scheduled crew meals. All trash and recycling should be disposed of properly through the course of the working day. Additionally, the cast and crew should not bring guests or pets to the location unless expressly authorized in advance by your Producer.

Every member of the cast and crew should keep noise levels as low as possible. Do not wear clothing, post signs, or act in a manner that lacks common sense and good taste. Cast and crew should refrain from the use of lewd or improper language within earshot of the general public. Shoes and shirts should be worn at all times. **Keep in mind that you are representatives of Towson University and the film industry as a whole.**

During the wrap, all furnishings should be returned to their original location, and the location should be thoroughly cleaned and all garbage must be removed. All departments are encouraged to do "dummy checks," revisiting EVERY room/location they filmed in or staged gear in throughout the day to search for leftover gear and trash. "***Leave the place better than you found it***" is a fantastic rule of thumb. Clean up after yourself and respect the location, its owners, and its neighbors.

We recommend that extensive, detailed photographs be taken of the location after all of the production members and equipment have been removed and the location has been cleaned to show the condition of the location after production ends. This is your best defense against conflicts with your location owners and potential insurance claims.

In the event of an accident, you must have a plan for how you will accommodate first responders. It is for this reason that we keep all pathways and doorways to and from set clear of equipment. If possible, leave a parking space available as close as possible to the location, or immediately move vehicles and clear equipment to make the injured person or hazard as accessible as possible. Establish a rally point and evacuation plan for the various types of hazards that may arise, unique to your location.

Working From Heights and Ladder Safety

When working at heights above 4 feet, or within 6 feet of the edge of a building, cliff, floor opening, etc., measures must be implemented to protect against falls. This may include guardrails or barriers, the use of personal fall arrest or fall restraint systems, such as body

harnesses, and/or hard hats. Consult with your faculty or EMF staff to discuss the specialized use of various ladder and height options (extension and A-frame ladders, scaffolding, lifts, etc).

We require that all ladders be operated by two people – the operator and a guard. The guard stands at, but not on, the base of the ladder and prevents people from bumping or jostling it while the operator uses the ladder. Depending on the height of a ladder, the guard should also assist in transporting the ladder, especially through doorways.

The ladder operator may never exceed the top two steps of a ladder (in the case of an A-frame), and must always use both hands and feet to remain in contact with the ladder at all times. The ladder must be set on a level surface, and should never be elevated on a platform to reach a higher height. The ladder operator may only use the ladder for vertical height and should never extend their bodies on a horizontal plane outside of the constraints of the ladder. This poses a tipping hazard. Check and confirm that all ladders are in a safe, working condition, and are compliant with your weight and height restrictions before using.

It is recommended to put signage on your ladders stating that they are not to be used by unauthorized individuals, and to store them in a manner in which they cannot be used without permission (such as stored with a lock).

Always be aware of who is working above or below you at all times. Never rest tools, equipment, coffee cups, props, etc. on ladders. The ladder is intended for climbing only.

Craft Services and Catering Responsibilities

The most effective way of preventing the spread of infectious disease and illness is through sanitation. This includes personal hygiene, clean equipment and materials, and sanitary conditions in the workplace and surrounding areas. Your best protection against spreading germs is by washing your hands frequently. Students are responsible for providing access to soap and water for all productions. If students can prove that access to soap and water is impossible at the given location and that every mitigation attempt has been satisfied (asking neighboring homes or businesses for access, providing a water dispenser such as an igloo container on set), a hand sanitizing gel should be provided.

- All food service areas should be kept clean, healthful, and free from debris, pests, and other unsanitary conditions.
- Food should be stored and served at proper temperatures.
- The use of community bowls and plates should not be used, especially during the ongoing COVID pandemic. This is an effort to limit the spread of bacteria and viruses. All meals should be individually wrapped.
- Receptacles for food waste must be provided and should be emptied at least once a day.
- Use biodegradable plates and utensils or porcelain and silverware, if possible.

Students are **required to provide access to potable drinking water** at all times, on all sets. If you are running low on water, make a run to pick up more BEFORE water runs out. **It is unacceptable to ever be without water on set. Regardless of your department, if you notice the water supply is running low, kindly alert the Producer**. At the end of the day, water should always be the last thing packed away so that cast and crew have access to it at all times.

Reusable water containers refilled from a clean and sanitary water dispenser will reduce waste, as well as reduce cost. If you must use plastic water bottles, provide a Sharpie or pen at craft services to place your initials on the cap and keep the bottle with you. Plastic water bottles should not be kept in the sun or stored in a car parked in the sun, as these factors risk leaching chemicals into the water.

Recycling is strongly encouraged on all productions. Separate trash and recycling containers should be present on all sets and locations, and all members of a production should be encouraged to use them.

Ultimately, it is the responsibility of the Location Manager, Craft Services, and Production Assistants to do the last “once over” of the set to clear any remaining trash.

Weather/Time of Day Concerns

The Set Safety Officer, alongside your ADs or Producers, is responsible for checking the weather forecasts and determining the impact on production. If the forecast has ANY inclement weather forecasted, the Set Safety Officer should be responsible for ensuring the necessary protection equipment is on set and that the information is communicated to the crew.

All call sheets should include forecasts for the current filming day and for the next filming day. Call sheets should go out the night before to enable the crew to prepare with the appropriate weather gear.

Extreme weather conditions, including thunderstorms, torrential rain or snow, and dangerously high winds, must result in a shutdown and rescheduling of production. Pre-planning can reduce many of the potential dangers posed by inclement weather.

The Set Safety Officer, alongside the Location Manager, should develop an "**action plan**" when preparing to use locations that may present an inclement or severe weather hazard. If there is the possibility of inclement or severe weather, the Set Safety Meeting should be held to review and communicate the elements of the action plan.

The action plan should designate a person who is responsible for monitoring potential inclement weather by commercial weather services, television and radio station news casts, or other available means. The action plan should include a method for communication with cast

and crew members in the event of inclement or severe weather while on set. The communication methods should reflect the conditions and circumstances at the scene.

The action plan should also include site-specific procedures for 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.

- ANY rain must result in a shutdown of exterior run power, including generators. In the event of a drizzle or a brief passing rain, black wrap, tarps, rubber mats (exterior door mats), can be used to cover cable connections. Cable connections should be elevated off of the ground with apple boxes. Hot lights can be covered with black wrap, which is flameproof. Do not place tarps, trash bags, etc, over hot lights!
- Anything more than a passing drizzle should result in all lights and electrical power being brought under cover, such as under a pop-up tent or indoors.
- Pop-ups and EZ-UP tents serve as an excellent staging for grip and electric, camera, craft services, and video village. All gear should be under tents to protect from the elements, as well as offering crew respite from the sun. Sandbags and tie lines on your tent are NECESSARY. Tents can quickly turn into projectiles if the wind picks up.

A Note: **Rain and wind can come on quickly and unexpectedly. Don't let a "light drizzle" determine when to start packing up or making equipment safe – be proactive and make the appropriate accommodations as soon as signs point to a change in weather. Download reliable radar and weather apps to track data in real time.**

Lightning may strike several miles from an associated thunderstorm and may strike when no clouds or rain are present. Given the amount of metal equipment used on film sets, as well as generators serving as conductors, any signs of lighting must result in an immediate shutdown of a film set according to the **30-30 rule.**

The 30-30 rule is a method of estimating the distance of lightning by listening to 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. 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 of lightning or thunder to establish an "all clear." Do not return to the area until the Set Safety Officer or Location Manager has given an "all clear" signal.

In **Cold Weather,** crew should be advised to dress appropriately and limit their exposure to the cold as much as possible. A warm space should be provided for cast and crew to rest in, whether it be an interior space or an enclosed tent with a heater. Craft services should provide both food and hot drinks, and must always have water.

Hypothermia and **frostbite** are two cold-weather concerns that are most life-threatening, and their symptoms include:

- Intense shivering
- Intense feelings of coldness or numbness
- Muscle tension

These may just seem like normal consequences of exposure to winter conditions, but ignoring these early signs can be very dangerous. If you or a co-worker experiences an early symptom of hypothermia, take action immediately. The set safety meeting should cover these concerns and emphasize the need for cast and crew to be mindful of taking care of themselves as they need to.

Frostbite is more common than hypothermia. It affects the outer skin layers and appears as a blanching or whitening of the skin. This usually disappears as warming occurs, but the skin may appear red for several hours. In severe cases, the skin will appear waxy-looking with a white, gray-yellow or gray-blue color. The affected parts will have no feeling, and blisters may be present. The tissue will feel frozen or “wooden." Other indications include swelling, itching, burning and deep pain as the area is warmed. Frostbite is more easily prevented than treated, so keep covered and mindful of these signals. **Seek medical attention**, as rewarming should be conducted under medical supervision. Warm water is best for re-warming; do not rub or massage the area, or use dry heat (sunlamp, radiator, heating pad). If blisters are present, leave them intact.

If the crew does not need to be outside, they should be out of the elements as much as possible. If going inside is not an option, exercise, jogging in place, and shaking your arms will increase your circulation and raise your body temperature. Eating healthy and frequently in cold weather will provide essential nutrients and increase your metabolism, circulation and ability to produce heat.

Condensation can occur on electronics and glass when alternating between cold and hot environments. Batteries drain quickly in cold weather and should be insulated accordingly. Consider keeping them in a cooler, car, insulated case, etc. Lastly, lights need to be handled more delicately in cold weather because of the rapid heating and cooling they experience under power. Always let lenses and scrims cool with the light, and remember to transport lights delicately. Kino Flo fluorescent bulbs may not strike at all if under too low a temperature. Always store gear susceptible to the cold inside before and after filming and limit its exposure to the cold when not in use.

In **Hot Weather**, the crew should again be advised to dress appropriately and to keep cool and hydrated. The chief concerns for high heat are **heat exhaustion** and **heat stroke**. Symptoms of heat exhaustion include:

- Nausea
- Weakness
- Dizziness
- Headache
- The inability to sweat.
- Fatigue
- Vomiting
- Loss of coordination
- Confusion and poor concentration
- Forgetfulness

Anyone experiencing these symptoms should stop, rest in a cool or shaded area, and seek medical attention. Water retention can be assisted with salt tablets or electrolyte-filled fluids, such as Pedialyte or Gatorade. Consider having fans available for air circulation.

The set safety meeting should cover all of these topics, and make sure that the location of and access to sunscreen and water are known to everyone. Individuals who have suffered heat exhaustion before are more susceptible to the earlier onset of symptoms, so they must be mindful to take care of themselves. Everyone should be reminded **not to wait** until they are thirsty to drink water, but to ***hydrate proactively.*** Again, access to water at all times is essential. As much downtime should be spent out of the sun or out of radiant heat.

In both hot and cold environments, production must be more forgiving of the time it takes to set up and break down equipment, as bodies will need time to acclimate to the environmental conditions. In addition, crews will need frequent breaks to take care of these essential health needs. Plan by padding your schedule accordingly.

When **filming after sundown** or in dark locations, production should provide everyone a flashlights, headlamps, and/or various work lights to assist in visibility and to identify tripping hazards. Telling your crew to rely on cell phone lights is not an acceptable solution, unless production provides access to ample chargers and external batteries, given a cell phone's importance for other emergency needs.

Equipment staging and cable runs need to be even more mindfully done in the dark, given the ease of losing a piece of equipment and the trip hazards they pose. Loading and unloading should be assisted with work lights. When working near traffic, the crew should wear reflective vests and buffer their loading area with road cones or triangles. Any work lights should be pointed down and towards the work itself, so as not to blind or affect drivers.

Other Environmental Hazards

No lighting equipment or power sources should be staged or used near water. This includes battery chargers, computers, etc. When working around or near controlled water environments (swimming pools, simulating rain, etc), all equipment needs to be worked from as far as possible from the water source, and any cable connections should be covered, elevated, and run to Ground Fault Current Interrupter (GFCI) outlets. Be mindful of standing water, such as puddles. IATSE advises that GFCIs need to be used when electrical equipment is within 10 feet of any water. GFCI outlets are commonly found in bathrooms and kitchens, and can also be placed in line with easily purchased plugs or specialized GFCI extension cords.

When working around sand, be mindful that it will get everywhere. Even minor winds can blow sand a fair distance. All equipment should be covered and protected from sand, especially sensitive camera equipment, and its exposure to sand must be as limited as possible. Filters can be used to cover and protect lenses, and tarps, garbage bags, and Bag-Its can be used to cover equipment and cases. Many EZ-Up production tents come with sides to insulate the tent interior. Clean the equipment in a sterile environment multiple times throughout the day, and absolutely before you return the equipment.

Students are liable to pay damage and/or cleaning fees for damage sustained by improper handling, storage, or operation of equipment.

Fire Safety

If you feel unsafe about your ability to fight a fire or handle an emergency situation, leave all emergency activities to professional emergency personnel by calling 911. If you voluntarily choose to use a fire extinguisher, only use it if you have been trained in its use and if the fire is very small. If the extinguisher does not put out the fire, leave immediately.

NEVER USE A FIRE EXTINGUISHER TO FIGHT A FIRE IF:

- The fire alarm has not yet been pulled, and the building has not been or is not currently being evacuated.
- 911 has not yet been notified that there is a fire. Make sure 911 is dialed for all fires - even if you think the fire is out. Fires that appear to be “out” may be smoldering and re-ignite at a later time and cause additional damage.
- The fire has already spread beyond the immediate area where it started or is already a large fire (bigger than a trash can).
- The fire could block your escape route.

If you become trapped, keep all doors closed.
Seal cracks and vents if smoke comes in. If you are trapped in a room and there is no smoke outside, open the windows - from the top to let the heat and smoke out and from the bottom to let in fresh air. Never prop or block fire doors open for ventilation or ease of passage. Fire doors are designed to restrict the spread of fire and smoke and should be closed at all times.

Signal for Help
Hang an object in the window (a bed sheet, jacket, shirt) to attract the fire department's attention. If there is a phone in the room, dial 911 and report that you are trapped. Be sure to give your room number and location. SOMETIMES IT IS SAFER TO STAY IN PLACE! If all exits from a floor are blocked, go back to your room, close the door, seal cracks, open the windows if safe, wave something in the window, and shout or phone for help. DON'T JUMP! THE FIRE DEPARTMENT WILL RESCUE YOU.

If your clothes catch on fire, immediately STOP, DROP, and ROLL. Rolling will smother the fire. Polyester (used in athletic jerseys) and other synthetic fabrics are heavily discouraged for set use because they melt quickly and can adhere to the skin, prolonging burn exposure. Use cool tap water on burns immediately. Do not use ointments. If skin is blistered, dead, white, brown or charred, call for an ambulance.

Proper Lifting Technique

The predominant reason for back injuries is due to improper lifting. Therefore, in order to alleviate this problem, the following techniques/guidelines are being provided to you. Please review and utilize these recommendations each and every time you lift objects.

Some general procedures/guidelines that are recommended before actual lifting are:

1. Know how heavy the load is (push or lightly lift on object to determine this) - get help or use special equipment to accomplish the task (hand truck, barrel dolly, etc. - remember to push, don't pull). If pushing or pulling on elevations, be aware of how gravity may shift the load or pull away from you. Two people are always recommended when moving loads on elevations.
2. Warm up - stretch/bend gently before lifting.
3. When possible, break larger loads into smaller ones.
4. Wear closed-toe shoes with non-skid soles.
5. Wear tight-fitting gloves - avoid loose-fitting clothes.
6. Load/unload at waist height.

Once the above have been accomplished, the following techniques/guidelines are recommended for actual lifting:

1. Stand close to the load.
2. Grip firmly with your hands, not just your fingers.
3. Bring the load close to your body, keep your arms and elbows tucked in.

4. Keep your weight centered - back straight, stomach muscles tight, feet spread.
5. Bend your knees, let your legs do the work - lift your head/shoulders first, then let your legs push your body up slowly and smoothly, push your buttocks out behind you.
6. Move slowly with the load, taking small steps.
7. Do not twist; if you have to change direction, move your feet first.
8. Face the spot you have chosen and lower the load slowly.
9. Place the load on the edge of the surface - slide into place.

For a two-person lift:

1. When possible, a third person is recommended for tracing the path, opening doors, removing obstacles, etc.
2. If you can, lifters should be of a similar height.
3. Communicate all maneuvers ahead of time, walking the path you will take, noting any hazards.
4. One person should give the "lift" command. Lift and raise at the same time - keep the load at the same height.
5. Move smoothly together - unload at the same time.
6. Communicate as changes and needs arise.

Grip and Electric Basics

It is the responsibility of the Gaffer and 2nd Electric (a role also referred to in the industry as the Best Boy or Best Girl) to make an electric management and distribution plan before coming to set, and preferably at the location/tech scout. The electric department becomes responsible for the distribution and allocation of power to all departments, per their needs and recommendations. This means taking an inventory of all of the outlets, estimating the circuits, working with the camera department to plan where light fixtures will be placed, and how much those fixtures will draw from each circuit. This will then determine where extension cords (stingers) will need to be run from, as well as how much additional space circuit can be afforded to other departments. This same process is true when using a generator, except that the distribution of power must also include long runs of extension cords or other cables.

Other departments should **never plug in without asking first.** A hair dryer or even a cell phone charger could be the last straw to a circuit breaking. The electrical department is responsible for knowing the location and operation of the circuit breaker box or generator when on location. Determine these locations during the scout. You don't want to waste time or pose additional risk to your crew when you are searching in the dark for a circuit breaker.

Not all circuits and/or generators are rated for every piece of film equipment, and so careful research must be done to ensure circuits are not overloaded and that equipment is protected. If a generator is to be used, the electrical department should appoint a **generator operator** whose job is to make sure the generator is in safe working condition, is operated safely, is properly fueled, and is properly rated for the equipment used on it. The generator operator should be the sole individual to operate the generator.

Here are a few notes on how to avoid tripping breakers:

- Most modern home interior electrical circuits are 20 amps, although many homes, businesses, and older locations will still feature 15-amp circuits. Don't assume. Most domestic residences and commercial operations are on a 120-volt system.
- 100 watts is roughly equal to 1 amp, and 1000 watts is roughly equivalent to 10 amps (on a 120-volt system). This measurement of approximation is called "paper amps." Paper amps can provide quick, accurate measurements of how much power is on any given circuit.[8]
- Two 1K tungsten lights on the same circuit will pull 2000 watts. The 1K refers to 1,000 watts. Therefore, both lights are pulling a total of 20 amps. Because of this, ANY additional power on that circuit will risk tripping the circuit breaker.
- It is the responsibility of the electrical department to authorize the use of circuits for other departments. It's advisable to offer camera, hair and makeup, and wardrobe their own circuits, if available, to not risk tripping breakers.
- Ground Fault Current Interrupter (GFCI) outlets, for use around water hazards and for high amperage equipment, are commonly found in kitchen and bathrooms, and are often 20-amp dedicated circuits.

At the start of the day or as part of the safety meeting, the electrical department should advise what their power needs are and where power can be pulled from for other departments. When ready, the electrical department will announce to the crew that they can begin to power up their own equipment, and that lighting units will begin to strike.

Additional electrical notes:

- Never leave a unit on "at the head" when powering down. "At the head" means the power is turned on either at the light fixture itself or on the cord powering the fixture. Turn off the light first, then unplug the light or turn off the generator supplying the power.
- Never "hot patch" a light. This means to plug it in with the unit turned on "at the head," causing energy to surge through the light hazardously. This is especially bad with units that use a ballast (such as the Joker 800 and Kino Diva lights) as it risks electrical damage to the unit and equipment damage fines for the student.
- Avoid piles of cables lying around on set. Keep a coil or two of additional slack at the unit or the wall outlet to make sure there is no strain on the cord or risk of the cord getting pulled out.
- Run your cable as close as possible to walls and avoid walkways to minimize trip hazards. If a cable does have to cross a walkway, cover it with gaff tape, a rug, a rubber mat, etc. These still serve as trip hazards, so make sure they are visible.
- Safety chains or cables should be used to prevent barn doors and lights from falling from rigged positions. They can also be used to provide strain relief for cables on lights. Make sure to use the supplied strain relief rope or chain on Fresnel units.

[8] https://nofilmschool.com/2015/07/infographic-how-avoid-tripping-breakers

- Gels can melt when exposed to high, concentrated heat. The spot function of a Fresnel lens or open-faced light centralizes heat, and lights pointed straight up and down may concentrate heat. Thicker density gels, such as colored party gels, are more susceptible to melting than thinner density gels.
- As you work with cables, make sure to periodically check that all connections are properly seated and that no pins are bent or missing, and that all cables are free of exposed or fraying wires.
- Always remove cables from the plug. Never pull a cable from an outlet or connection by the cable itself.
- If you smell rubber melting or wires burning, pause the set until you have discovered and fixed the cause. If you see something smoking, make it known, but do not immediately assume fire. Electricians should cut the power and investigate the cause, but it may be as simple as dust or an insect momentarily burning, or a gel needing to be repositioned to avoid melting. Calmly remedy the problem.
- NEVER throw water onto an electrical fire. This is why you should have an ABC-rated fire extinguisher on set.
- **Never touch an Ikan, Arri, or Joker 800 bulb with your bare hands.** The oil on your hands will create a hot spot on the surface of the lens, which compromises the glass and causes the bulb to explode when turned on. You should always wear gloves and eye protection when checking a bulb. The EMF Production Labs will swap bulbs if yours has broken. If you have accidentally touched a bulb, it can be cleaned with an alcohol prep wipe or lens cleaning wipe.
- All lights become warm to the touch when operating, but several become dangerously hot to the point of burning yourself and your environment. Always wear protective gloves when operating lights and wait for the lights to cool before packing. Never set a hot light, lens, or scrim on carpet, hardwood, or floors or surfaces susceptible to heat.

Do not take electricity for granted. Temporary set-ups like film sets are intrinsically dangerous because they are new and unknown to most of the people near them. Keep this in mind at all times and always err on the side of safety.

Light	Wattage Pull (or equivalency)	Amp Pull	Color
Arri/Ikan 150	150w	1.5 amps	Tungsten
Arri/Ikan 300	300w	3 amps	Tungsten
Arri/Ikan 650	650w	6.5 amps	Tungsten
Arri/Mole Richardson 1K	1,000w	10 amps	Tungsten
F&V LED 1x1 Panel	25w	.25 amps	Bi-Color
Joker 800	1,100 watts (4000w equivalent)	11 amps	Daylight
Kino Flo Diva 400	200 watts (400w equivalent)	2.16 amps	Bi-Color
Mole Richardson LED 650	100w (650 equivalent)	1 amp	Daylight
Mole Richardson LED 1k	150w (1k equivalent)	1.5 amp	Daylight
Quasar Crossfade	25w (300w equivalent)	.3 amp	Bi-Color

Basic C-Stand Etiquette

C-stands are incredibly versatile tools for the set and can be used and rigged in a variety of ways. However, several safety pointers should always be utilized.

- Always place the longest and highest leg under the extended gobo arm. This is the leg that balances the weight of the load and the stand. Always place sandbags on this leg, wrapping the post, to counter the weight, and so it's not resting on the ground. For heavier loads, use one sandbag for every extended stage of the riser. Be cautious and use more sandbags and additional tie-downs in wind or on high levels. Consider having a grip or PA "body bag" the stand when necessary, by standing by the stand and holding it. This is especially true of exterior rigging and windy situations.
- Plan ahead with the EMF Equipment Cage to make sure you have the appropriate number of sandbags.
- The knuckle of the gobo head should always be on the right when standing behind the stand. The weight of the gobo arm on the knuckle should cause it to tighten if it slips, meaning it is rigged in a clockwise direction (spinning to the right, as in "righty tighty").
- Always avoid points that extend past the footprint of the stand base, and which come to eye level. If you absolutely must rig a C-stand where the points are at eye level, make sure to cover them with a tennis ball, taped water bottle, or highly visible tape.

Audio and Studio Concerns

In both the studio and set environments, there are a couple of pointers specific to the audio department that students should be aware of.

First, as with all equipment, it's advised that before and after any session that the board operator wash his or her hands. Equipment is regularly sanitized by the EMF Production lab staff, but this extra precaution is helpful for minimizing the spread of bacteria. Second, as you work with cables, make sure to check that all connections are properly seated and that no pins are bent or missing, and that all cables are free of fraying or exposed wires.

Cable management is key! Both in the studio and on-set, properly running cables, taping where necessary or having a separate cable wrangler to assist operators, will prevent tripping hazards and damage to equipment. There should be no liquids staged on top of equipment or near electricity, and any liquids should be securely capped. Absolutely no liquids are allowed in studios.

Ear fatigue can occur during long sessions without breaks. In general, you should consider taking a 10-minute break every hour to give your ears some relief. Likewise, consider turning your headphone volume down or consider wearing PPE when micing loud sounds.

Lastly, because of some of the unique requests of the department, audio technicians are encouraged to be their own advocates for their needs. If a boom operator is asked to hold a long take for 15 minutes, they need to speak up and remind production that they won't be able to go again immediately and may need to take a break to relieve arm fatigue. Likewise, the boom operator may need to speak up to other departments to collaborate on how gear or rigging is placed so that they can boom a shot or develop a plan for how to mic otherwise if a boom is impractical. A general awareness of your surroundings is necessary as a boom operator so that you do not pose a hazard to yourself, to others, or to equipment as you move the pole around. Always look overhead and/or around before swinging.

Stunts and Special FX

Student filmmakers should consult with their faculty to determine how Special Effects and Stunts will be integrated into their films. The Special Effects and Stunts Coordinators are responsible for overseeing their departments and will work with the Set Safety Officer to communicate their needs to the rest of the set. Only coordinators who are professionally trained or certified in their respective crafts should be allowed to perform their craft.

Set Safety officers are responsible for checking with their cast and crew in regards to considerations surrounding the use of special effects. Examples may include inducing epileptic seizures when using flashing or strobing lights, or sensitivities to atmospheric fog or haze.

Weapons/Firearms

Students are responsible for coordinating their specialized prop needs with their faculty member, who can help to determine best practices. In general, a single member of the crew will be deemed the Prop Master, who is responsible for the safety of the set when operating props, as well as the security of the props themselves. Only prop weapons and prop firearms will be allowed on set. <u>The use of actual weapons at any time is strictly prohibited.</u>

Prop weapons and firearms are to be treated with the same respect you would treat an actual weapon or firearm. All rehearsals and blocking will be conducted without the props. Only during actual takes will the Prop Master provide actors with the prop weapon or firearm. As soon as the take is cut, the Prop Master will take the prop weapon/firearm back and immediately store it safely and securely away.

The Prop Master is solely responsible for the transportation of props to and from the set. **Prop weapons or firearms are not allowed to be used or stored on campus whatsoever.**

Camera Cars and Driving

Student filmmakers will work with their faculty to determine how cars may be integrated into their films. Students are responsible for obtaining all of the appropriate permits and recognizing all state and local laws when performing driving shots. Students recognize that all drivers must have a proper and valid license, and that all camera cars are properly insured. Students agree that they are solely responsible for any liability surrounding the use of driving material in their films. Student filmmakers are solely responsible for educating themselves on any additional safety, rigging, or car operation details not listed here.

In general, camera car shots should only be in motion when they absolutely have to be. A location scout should determine driving locations that can be driven and filmed safely. The Maryland Film Office (see additional resources below) is an excellent resource for properly securing driving locations.

Filming in and around cars poses a unique challenge. The most important rule to keep in mind is that the driver/operator has the ultimate authority to suspend operation of the vehicle at any time for any reason they deem unsafe. Driving safely is the first priority, and acting and/or getting the shot is second.

When filming in or outside of a car, every single shot requires a specific safety meeting involving all personnel riding in the camera car or close proximity (e.g., stunt personnel or background performers, etc.). This meeting should include a "walk-through" or "dry-run."

An understanding of the intended action, possible changes due to hazards, and authority to abort, including signals to be used, should be made clear. If, for any reason, there is a change in the choreography of the camera car, other picture vehicle(s) in the shot, or personnel involved in the shot, a safety meeting should be held with all personnel involved to ensure everyone understands the changes and is in agreement with those changes.

Any rigging to the interior or exterior of the car (lights, camera) should not obstruct the driver's view. All rigged equipment should be securely mounted. If cameras are mounted to any part of the vehicle (either inside or out), these should be securely installed with the appropriate mounts/restraints and by a member of the crew who is qualified to perform the procedure.

The driver is the sole determiner of what they deem safe. Again, the chief concern is for the ability of the driver to simultaneously perform, drive, and remain aware of any clearance required for rigging or equipment that extends beyond the vehicle.

Working with Minors

All non-TU affiliate actors and crew must sign a Volunteer Designation Form, noting the EMF faculty member as the Department Designee. A separate parental consent form must be signed for minors under 18. Both forms can be found here:
https://www.towson.edu/about/administration/policies/06-16-00-volunteer-policy.html
https://www.towson.edu/hr/documents/volunteer_parental_consent_form.pdf

This form is in addition to your standard consent and release form, which will be provided by your faculty member or found on the EMF website:
https://www.towson.edu/cofac/departments/mediafilm/resources/documents/releaseform.pdf

All student productions on campus must abide by the Protection of Minors policy seen here: https://www.towson.edu/about/administration/policies/06-22-00-protection-minors-university-programs-activities.html

For productions held on campus, students must require that a sponsor be in charge of the minor. A parent or guardian can serve as the sponsor. If a faculty/staff member is to serve as the sponsor in the absence of a parent or guardian, they must consult with the Environmental Health and Safety (EHS) office[9] before filming to determine whether safety training and fingerprinting are advisable. Students are not allowed to serve as sponsors.

For productions held off-campus, students are advised to have parents/guardians on set with their children at all times. When and if this is not possible, students must consult with their faculty member to secure the appropriate consent and release forms from both minors and parents, unique to their situation.

In Maryland, all minors under 17 years old must have a special work permit for *PAID* employment, including acting and modeling[10]. Non-paid volunteer minors, employed with the written consent of a parent or one standing in the place of a parent, may work without the filing of a special permit. However, both paid and unpaid minors have restrictions on their working hours. For a full list of regulations, see https://www.dllr.state.md.us/labor/wages/minorfactsheet.pdf.

Per the Producer's Guild advising, before rehearsal or filming, the filmmakers should perform an initial review of the physical activity required of minors, including but not limited to:

a. the age, height, weight, and maturity of the minor,
b. the physical fitness, coordination, expertise in the planned activity, and film experience of the minor,
c. the amount of additional information and movement the minor will be asked to consider (e.g., camera positions, acting, looking over the shoulder, waving arms, etc.),
d. how wardrobe or props will affect the actions and/or vision of the minor,

[9] https://www.towson.edu/public-safety/environmental-health-safety/
[10] http://www.labor.maryland.gov/forms/essminorspecworkpermitapp.pdf

e. the amount of rehearsal and preparation time which has been provided,
f. the appropriate amount of protective gear or equipment necessary to safely perform the activity,
g. the area around the minor during the activity, and
h. any other factors affecting the minor.

Before rehearsal or filming, key production personnel, including the Director, AD, and Set Safety Officer, should confer with the minor and the minor's parent/legal guardian to review and discuss the filming activity. These personnel, including the parent/legal guardian, should always be present during filming. If a consensus regarding the physical activity is not established, any of these personnel may request a re-evaluation of the activity in its entirety. If, after the discussion, an agreement is reached on the planned activity, but the minor expresses apprehension about performing the planned activity, he/she may refuse to do it.

Insurance - From Employee Safety Program

University-owned property and property in which the State has an insurable interest are covered for direct physical loss or damage by the State Insurance Trust Fund and commercial policies. Coverage is on a "Replacement Cost Basis" and applies to all buildings and contents, materials and supplies, and machinery and equipment. The coverage provides for losses caused by fire, explosion, windstorms, vandalism, flood, steam boiler and machinery breakdown, and any other direct property losses. Property coverage exclusions apply. All losses should be reported as soon as possible (within 24 hours or next business day) to the Insurance Administrator. The Insurance Administrator will advise the State Treasurer's Office of the loss and will provide the affected department(s) with the proper procedures to follow and a listing of the required documentation to submit for reimbursement. Necessary actions should be taken to mitigate damage; however, only emergency procurement of services/commodities can be obtained without prior approval of the Insurance Administrator.

As a rule, personal property is not covered by the State unless the loss is considered to be caused by negligence on the part of the University. The State Treasurer's Office will investigate and determine each case on the merits of the claim. It is important to note that Towson University does not assume responsibility for personal or non-university-owned property kept or stored in University facilities. Should damage or loss occur, payment for loss or replacement is the responsibility of the individual. Employees are encouraged to verify if their personal insurance covers any personal property brought on campus.

The State of Maryland does not provide insurance coverage for theft. Adequate measures should be taken to properly secure all State property. Any instances of theft/loss should be reported to TUPD and Property Control.

Safety Equipment Recap

On EVERY set, students are responsible for providing:

- First Aid Kit
- Clothing matched for the appropriate weather conditions
- Specialized PPE, such as gloves for operating hot lights
- Closed-Toe Shoes with substantial tread, no crocs or heels

Students are also responsible for the following when necessary:

- Fire Extinguishers
- Specialized PPE (such as high visibility vests and eye protection)
- Specialized rigging equipment, such as harnesses
- Ear Protection in the case of equipment/sounds operating over 85 decibels (such as generators and power tools)
- Work Lights, such as flashlights and headlamps
- In-line GFCI outlet plugs or stingers for water hazards
- Ladders
- Layout boards (Cardboard) for protecting floors and equipment
- Protective wrap for locations (tissue paper, bubble wrap)
- Trash and recycling cans for location use
- Coolers, Igloo Containers, etc.
- Pop Ups and EZ-Up Tents
- Tarps, Camera Covers, Bag Its
- Folding Chairs/Tables, etc.
- Heaters
- Fans
- Location signage

The EMF Equipment Cage does not supply any of the above. Before purchasing the above specialty safety gear, consider checking with local rental houses to see what they have available to rent.

Additional Resources

This document heavily sources from the "Television and Feature Production Safety Manual," which is a resource of the Producer's Guild and Warner Bros. Injury & Illness Prevention Program:
https://safetyontheset.com/wp-content/uploads/2023/02/US_Television-and-Feature-Production-Safety-Manual.pdf

www.Safetyontheset.com is a resource provided by the Producer's Guild and WB Department of Safety & Environmental Affairs listing new and additional safety bulletins that apply to the television/film industry and its various unions. For additional information on working with hazardous materials, varying weather scenarios, stunts and special effects, and animal handling, check their website.

IATSE has released a mobile application called "IATSE Safety App," which is an easily accessible library of safety bulletins, articles, and other resources for quick hand reference on set:
https://iatse.net/education/

https://www.towson.edu/publicsafety/ is Towson's Public Safety Office, responsible for overseeing TUPD, the Office of Emergency Preparedness, Environmental Health & Safety, and Access Control. Their office assists with advising on dealing with hazardous waste, biological safety, fire safety permits, CPR training, emergency medical training, and building access, among others. The TU Employee Safety booklet covering these topics can be found here:
https://www.towson.edu/public-safety/environmental-health-safety/programs/employee-safety.html

TUPD offers emergency medical training through its "Make It" training course. The course trains civilians on how to treat themselves and others while waiting for help following an active shooter event. You will learn to identify life-threatening injuries and learn ways to treat them without medical equipment. Anyone can register for classes, which are given throughout the semester: https://www.towson.edu/public-safety/emergencies/

The Baltimore Film Office has information regarding obtaining permits, locations, and film resources within Baltimore City: http://baltimorefilm.com.

Maryland Film Office has information regarding obtaining permits, locations, and film resources within the rest of Maryland http://marylandfilm.org/.

The Baltimore County Government website (whose jurisdiction covers Towson, MD, and the surrounding area) has information regarding film permitting and location needs, such as road closures, at their website:
https://www.baltimorecountymd.gov/departments/pai/miscellaneous-permits
Miscellaneous Permits and Film Production permits are listed on this page.

More EMF-specific forms and resources can be found at:
https://www.towson.edu/cofac/departments/mediafilm/resources/labs.html