



## GIT295: Technical Imaging

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### Course and Faculty Information

**Course Description:** Explores imaging technologies utilized in industry. Covers basic imaging concepts, chip technologies, optics, motion analysis, high-speed video, thermal imaging, and science relating to light and latent imaging.

#### Overview:

This course introduces the student to the different techniques and approaches that comprise technical imaging. These are areas beyond what is conventionally thought of as photography. It covers basic imaging concepts, imaging sensor technologies, optics, motion analysis, and science relating to light and problem solving using imaging technologies. The goal of this course is not only to expose students to the depth and reach of various imaging technologies but also to grasp their utility in numerous industrial settings. This course prepares both the creative student and the engineering student to make choices about delving deeper into technical imaging.

#### Credits: 3

Section(s)	Days	Time	Location
74153	MW	3:00 - 4:15pm	Poly TECH110

#### Enrollment Requirements:

Undergraduate student; Credit is allowed for only GIT 295 or 294 (Introduction to Technical Imaging)

**Instructor:** Chad Westover

#### Contact Information:

Email: [chad.westover@asu.edu](mailto:chad.westover@asu.edu)  
Phone: 480.727.1558  
Office Hours: Schedule online via **Calendly**  
Office Location: Polytechnic Campus, Tech Building #144

#### Office Hours:

For Fall 2022, Office Hours will be conducted online via Zoom unless otherwise arranged. Schedule via Calendly, see above.

### Course Learning Outcomes

At the completion of this course, students will be able to:

- Differentiate between capture technologies
- Identify the basic components of an image capture system
- Demonstrate an understanding of the relevance of the photoelectric effect to all imaging technologies
- Identify different techniques for capturing high-speed events and demonstrate an understanding of time/motion analysis
- Discuss the relevance of different imaging strategies for a variety of industry purposes

## Textbooks

There is no required textbook for this class. Reading materials will be provided. A series of relevant articles and materials will be posted and distributed in class. The student will be expected to maintain a notebook of materials received and a digital folder for all online files.

## Software (required)

- Adobe Photoshop 2022
- Adobe Illustrator 2022
- Adobe Bridge CC
- Adobe Lightroom Classic CC
- Slack

*\* as of Fall 2020, ASU students can access the Adobe Creative Cloud library of software for free. Please follow the instructions [here](#) to claim your free subscription. Contact your instructor if you have difficulties signing up.*

## Course Access

Your ASU courses can be accessed by [my.asu.edu](http://my.asu.edu), [asu.instructure.com](http://asu.instructure.com), and [myasucourses.asu.edu](http://myasucourses.asu.edu); bookmark all three in the event that one site is down.

## Additional Requirements:

This course requires the following technologies:

- Web browsers (**Chrome**, **Mozilla Firefox**, or **Safari**)
- **Slack Client**
- **Adobe Acrobat Reader**(free)
- **Adobe Flash Player**(free)
- Webcam, microphone, headset/earbuds, and speaker
- Microsoft Office (**Microsoft 365 is free** for all currently-enrolled ASU students)
- Reliable broadband internet connection (DSL or cable) to stream videos.

## Student Success

To be successful:

- attend every scheduled class
- check the course daily
- read announcements
- read and respond to course email messages as needed
- complete assignments by the due dates specified
- communicate regularly with your instructor and peers
- create a study and/or assignment schedule to stay on track
- utilize additional instructional videos that could be helpful for absorbing course content, including those from YouTube and Lynda.com/LinkedIn Learning.
- access **ASU Student Resources**

## Grading

This course will be graded on an A-E plus/minus scale.

Name:	Range:	
A+	100 %	to 97.0%
A	< 97.0 %	to 94.0%

Name:	Range:	
A-	< 94.0 %	to 90.0%
B+	< 90.0 %	to 87.0%
B	< 87.0 %	to 84.0%
B-	< 84.0 %	to 80.0%
C+	< 80.0 %	to 76.0%
C	< 76.0 %	to 70.0%
D	< 70.0 %	to 60.0%
E	< 60.0 %	to 0.0%
EN	-	Failing for Not Participating
EU	-	Failing for Incomplete Participation
XE	-	Academic Dishonesty

## Assignment Schedule

Deadlines will vary. It is critical that you attend class and monitor Canvas and Slack carefully.

## Submitting Assignments

All assignments, unless otherwise announced, **MUST** be submitted to the designated area of Canvas. Do not submit an assignment via email - they will not be accepted or graded. Canvas can take a great deal of time for large uploads and during times of heavy traffic such as midterms and finals. Plan accordingly and be prepared to use a third-party product, such as Dropbox.com, to reliably turn in large files. Late submissions due to Canvas upload delays or failures will be graded as late.

Assignment due dates follow Arizona Standard time. Click the following link to access the [\*\*Time Converter\*\*](#) to ensure you account for the difference in Time Zones. Note: Arizona does not observe daylight savings time.

## Grading Procedure

Grades reflect your performance on assignments and adherence to deadlines.

## Late or Missed Assignments

Notify the instructor **BEFORE** an assignment is due if an urgent situation arises and you are unable to submit the assignment on time.

Late quizzes are not accepted. Late projects are subject to a 10% deduction per day late. This penalty is automatically applied by the Canvas grade book.

## Communicating With the Instructor

This course uses a “three before me” policy with regard to student-to-faculty communications. When questions arise during the course of this class, please remember to check these three sources for an answer before asking me to reply to your individual questions:

1. Course syllabus
2. Announcements in Canvas
3. Course Slack Workspace

This policy will help you in potentially identifying answers before I can get back to you and it also helps your instructor from answering similar questions or concerns multiple times.

If you cannot find an answer to your question, please first post your question to the group using Slack. Here your question can be answered to the benefit of all students by either your fellow students who know the answer to your question or the instructor. You are encouraged to answer questions from other students when you know the answer to a question in order to help provide timely assistance.

If you have questions of a personal nature such as relating a personal emergency, questioning a grade on an assignment,

or something else that needs to be communicated privately, you are welcome to contact me via email or phone. My preference is that you will try to email me first. I will usually respond to email and phone messages from 8am to 5pm on weekdays, please allow 24-48 hours for me to respond. When emailing, you must be sure to include 'GIT 295' in the subject line to ensure that your email is seen. Social media messages will not be read and will not receive a response.

If you have a question about the technology being used in the course, please contact the UTO Help Desk for assistance (contact information is listed below).

## Email

ASU email is an **official means of communication** among students, faculty, and staff. Students are expected to read and act upon email in a timely fashion. Students bear the responsibility of missed messages and should check their ASU-assigned email regularly.

In addition, much of the course communication will take place in Slack. Use the link in the Canvas navigation bar to locate the class Workspace and be sure to sign in on the Slack app.

***All instructor correspondence will be sent to your ASU email account and/or Slack.***

## Additional Course Policies

### Attendance and Participation

Attendance and participation in class activities are an essential part of the learning process, and students are expected to attend class regularly. Some absences are, however, unavoidable. Excused absences for classes will be given without penalty to the grade in the case of (1) a university-sanctioned event [ACD 304-02]; (2) religious holidays [ACD 304-04; a list can be found here <https://eoss.asu.edu/cora/holidays>]; (3) work performed in the line-of-duty according to [SSM 201-18]; and (4) illness, quarantine or self-isolation related to illness as documented by a health professional.

Anticipated absences for university-sanctioned events, religious holidays, or line-of-duty activity should be communicated to the instructor by email at least 7 days before the expected absence.

Absences for illness, quarantine or self-isolation related to illness should be documented by a health professional and communicated to the instructor as soon as possible by email.

Excused absences do not relieve students from responsibility for any part of the course work required during the period of absence. Faculty will provide accommodations that may include participation in classes remotely, access to recordings of class activities, and make-up work. Students are responsible for seeking out accommodations as needed, the instructor will not reach out if you miss a class.

If there is a disagreement as to whether an absence should be accommodated, the instructor and student should contact the academic unit chair immediately for resolution.

### ***Special Note Regarding COVID-19***

If you test positive or have symptoms, we ask that you follow the **CDC recommended steps to self-isolate** and avoid contact with others, except to get medical care. Students can contact ASU Health Services (480-965-3349 or [eoss.asu.edu/health](https://eoss.asu.edu/health)), who will advise you about scheduling a telehealth or in-person appointment; students should also contact their professor to work out plans regarding missed class time.

ASU urges students to get vaccinated (and boosted) against COVID-19 and to follow protocols about face coverings inside buildings and in crowded places. Testing is also crucial and available at no charge to the ASU community through **Devils' drop-off** at multiple locations. **ASU Health Services** has COVID-19 vaccines, third doses and boosters; students can begin that process through the **ASU point-and-click health portal**.

### Drop and Add Dates/Withdrawals

This course adheres to a compressed schedule and may be part of a sequenced program, therefore, there is a limited timeline to drop or add the course. Consult with your advisor and notify your instructor to add or drop this course. If you are considering a withdrawal, review the following **ASU policies**: Withdrawal from Classes, Medical/Compassionate Withdrawal, and a Grade of Incomplete.

### Grade Appeals

Grade disputes must first be addressed by discussing the situation with the instructor. If the dispute is not resolved with the instructor, the student may appeal to the department chair per the University Policy for Student Appeal Procedures on

Grades.

## Course Evaluation

Students are expected to complete the course evaluation. The feedback provides valuable information to the instructor and the college and is used to improve student learning. Students are notified when the online evaluation form is available.

## Syllabus Disclaimer

The syllabus is a statement of intent and serves as an implicit agreement between the instructor and the student. Every effort will be made to avoid changing the course schedule but the possibility exists that unforeseen events will make syllabus changes necessary. Remember to check your ASU email and the course site often.

## Academic Integrity

Academic honesty is expected of all students in all examinations, papers, and laboratory work, academic transactions, and records. The possible sanctions include, but are not limited to, appropriate grade penalties, course failure (indicated on the transcript as a grade of E), course failure due to academic dishonesty (indicated on the transcript as a grade of XE), loss of registration privileges, disqualification and dismissal. For more information, see <http://provost.asu.edu/academicintegrity>

## Disability Resources

Students who feel they will need disability accommodations in this class but have not registered with the Disability Resource Center (DRC) should contact DRC immediately. The DRC Tempe office is located on the first floor of the Matthews Center Building. DRC staff can also be reached at: (480) 965-1234 (V) or (480) 965-9000 (TTY). For additional information, visit: [www.asu.edu/studentaffairs/ed/drc](http://www.asu.edu/studentaffairs/ed/drc).

## Expected Classroom Behavior - Campus Courses

Arrive on time for class. Excessive tardiness will be subject to sanctions. Under no circumstances should you allow your cell phone to ring during class. Any disruptive behavior, which includes ringing cell phones, listening to your mp3/iPod player, text messaging, constant talking, eating food noisily, reading a newspaper, etc will not be tolerated.

When attending Zoom meetings you are encouraged to turn off your camera and microphone except when speaking. Behavior that would be considered inappropriate in a physical classroom environment will be equally unacceptable in a live-streamed meeting. You are required to use your name on zoom calls, no aliases. Harassing or distracting behavior in a remote meeting will result in penalties and potential academic sanctions up to and/or including legal action.

## Policy Against Threatening Behavior

All incidents and allegations of violent or threatening conduct by an ASU student (whether on or off campus) must be reported to the ASU Police Department (ASU PD) and the Office of the Dean of Students. If either office determines that the behavior poses or has posed a serious threat to personal safety or to the welfare of the campus, the student will not be permitted to return to campus or reside in any ASU residence hall until an appropriate threat assessment has been completed and, if necessary, conditions for return are imposed. ASU PD, the Office of the Dean of Students, and other appropriate offices will coordinate the assessment in light of the relevant circumstances. For more information please visit <https://eoss.asu.edu/dos/srr/PoliciesAndProcedures> and <https://eoss.asu.edu/dos/safety/ThreateningBehavior>.

## Reporting Title IX Violations

Title IX is a federal law that provides that no person be excluded on the basis of sex from participation in, be denied benefits of, or be subjected to discrimination under any education program or activity. Both Title IX and university policy make clear that sexual violence and harassment based on sex is prohibited. An individual who believes they have been subjected to sexual violence or harassed on the basis of sex can seek support, including counseling and academic support, from the university. If you or someone you know has been harassed on the basis of sex or sexually assaulted, you can find information and resources at <https://sexualviolenceprevention.asu.edu/faqs>.

As a mandated reporter, I am obligated to report any information I become aware of regarding alleged acts of sexual discrimination, including sexual violence and dating violence. ASU Counseling Services, <https://eoss.asu.edu/counseling>

is available if you wish to discuss any concerns confidentially and privately. ASU Online students may access 360 Life Services, <https://goto.asuonline.asu.edu/success/online-resources.html>.

## Policy on Sexual Discrimination

Arizona State University is committed to providing an environment free of discrimination, harassment, or retaliation for the entire university community, including all students, faculty members, staff employees, and guests. ASU expressly prohibits **discrimination**, **harassment**, and **retaliation** by employees, students, contractors, or agents of the university based on any protected status: race, color, religion, sex, national origin, age, disability, veteran status, sexual orientation, gender identity, and genetic information.

As a mandated reporter, I am obligated to report any information I become aware of regarding alleged acts of sexual discrimination, including sexual violence and dating violence. ASU Counseling Services, <https://eoss.asu.edu/counseling>, is available if you wish discuss any concerns confidentially and privately.

## Copyrighted Materials

Students must refrain from uploading to any course shell, discussion board, or website used by the course instructor or other course forum, material that is not the student's original work, unless the students first comply with all applicable copyright laws; faculty members reserve the right to delete materials on the grounds of suspected copyright infringement.

The contents of this course, including lectures and other instructional materials, are copyrighted materials. Students may not share outside the class, including uploading, selling or distributing course content or notes taken during the conduct of the course. Any recording of class sessions is authorized only for the use of students enrolled in this course during their enrollment in this course. Recordings and excerpts of recordings may not be distributed to others.

## Academic Integrity

ASU expects and requires all its students to act with honesty and integrity, and respect the rights of others in carrying out all academic assignments. Fulton Schools of Engineering takes academic integrity VERY seriously. Students in this class must adhere to ASU's academic integrity policy, which can be found at <https://provost.asu.edu/academic-integrity/policy>). Students are responsible for reviewing this policy and understanding each of the areas in which academic dishonesty can occur. In addition, all engineering students are expected to adhere to both the ASU Academic Integrity Honor Code and the Fulton Schools of Engineering Honor Code. All academic integrity violations will be reported to the Fulton Schools of Engineering Academic Integrity Office (AIO). The AIO maintains records of all violations and has access to academic integrity violations committed in all other ASU colleges/schools.

### Plagiarism

Although ASU encourages collaboration between students, and faculty, in the sharing of ideas and experiences, individual work needs to represent the student's original thought and be distinguishably different from other students' work. Copying from other people's work in part or in whole will result in a ZERO grade for the whole work. Recurring plagiarism will result in obtaining an XE and reporting each student's misconduct.

## Disability Resources

Any students who have special needs or need accommodations in this course are encouraged to communicate with me as soon as possible to make appropriate arrangements for these accommodations. The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. One element of this legislation requires that all qualified students with documented disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring accommodation please contact the Disability Resource Center (DRC) at ASU Polytechnic located in Student Affairs Quad # 4 or call 480-727-1039 / TTY: 480-727-1009. Please note that students who may need accommodations must register with the ASU Disability Resource Center and provide documentation of that registration to the instructor. Eligibility and documentation policies online: <http://www.asu.edu/studentaffairs/ed/drc/>

## Technical Support

This course uses Canvas to deliver content. It can be accessed through MyASU at <http://my.asu.edu> or the Canvas home page at <https://myasucourses.asu.edu>

To monitor the status of campus networks and services, visit the System Health Portal at <http://syshealth.asu.edu/>

To contact the help desk call toll-free at 1-855-278-5080.