

The University of Texas at Tyler
College of Business and Technology
Department of Technology

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TECH 3342 – Applications of Photogrammetry
Course Syllabus — Fall 2021
ONLINE CLASS

Class Location. Online

Office Hours. I will not have formal office hours since this is an online course. Email is my preferred means of communication. I rarely check the school email account, so please email me at josh@searchersls.com.

Course Description. This course will cover aerial photogrammetry and remote sensing. The primary focus of this course is to prepare future land surveyors for the Surveyor in Training (SIT) exam and professional practice as a land surveyor.

Course Text. Elements of Photogrammetry with Applications of GIS, 4th Edition by Paul R. Wolf, et al.

Course Objectives:

1. Provide students with basic knowledge of photogrammetry including, but not limited to, the history of aerial photogrammetry, the camera, optics of the photogrammetry camera, orthophotos, relief displacement, fundamentals of mission planning and execution, flight heights, and scales.
2. Provide students with an understanding of remote sensing and its relation to photogrammetry and geodesy.

Grading:

Essay	15%
Quiz 1	15%
Quiz 2	15%
Quiz 3	15%
<u>Final Exam</u>	<u>40%</u>
Total	100%

Grade Scale Breakdown

A = 90 – 100%
B = 80 – 89.9%
C = 70 – 79.9%
D = 60 – 69.9%
F = Below 60%

Essay: Each student must complete one essay for this course. Essay (due on the last day of finals) may cover **any photogrammetry or remote sensing topic**. Essay must be a minimum length of **3 full pages** double spaced, have 1-inch margins, and use Times New Romans 12 point font. **Page length does not include cover page or the works cited page**. Paragraphs should generally have between 4 and 8 sentences, and the sentences must be complete.

The essay will be graded subject to the following penalties. Penalties will be assessed off the top of the allowed grade before any other grading is tallied. If all three of the penalties are assessed, the paper will receive a grade of zero.

1. 20-50% penalty if any paragraph contains more than 10 sentences.
2. 20-100% penalty for any essay shorter than 3 pages.
3. 100% penalty if the essay is not a topic relating to the topics of this course.

The essay shall include the following information at the top of the first page unless a cover page containing this information is used:

First & Last name of student
Course Name and Number
Date

Possible topics include, but are not limited to:

1. Drones (as they relate to surveying)
2. The future of surveying remote sensing using drones
3. Aerial photogrammetry v. drones
4. LiDAR
5. Changes in Digital Photogrammetry v. Analog Photogrammetry (film)

Use of Canvas. Please use your UTT email ID and password access Canvas. All class notes will be posted on Canvas for students to review. It is the students' responsibility to regularly check Canvas for assignments. Due to the nature of this course, students should check Canvas every day for announcements and discussion posts. It is the student's responsibility to read all correspondence and keep up with the due dates and deliverables for this course. The key to successful completion of this course, or any online course, is organization. This course is not a self-paced course and requires constant use of Canvas. Please keep up with all communications and deadlines, as deadlines exist because the course is offered within the UT Tyler course schedule and so that students can complete the course successfully in a timely manner.

University Policies. The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrates a high standard of individual honor in his or her scholastic work. Scholastic dishonesty includes, but is not limited to, statements, acts or omissions related to applications for enrollment of the award of a degree, and/or the submission, as one's own work of material that is not one's own. As a general rule, scholastic dishonesty involves one of the following acts: cheating, plagiarism,

collusion and/or falsifying academic records. Students suspected of academic dishonesty are subject to disciplinary proceedings.

University regulations require the instructor to report all suspected cases of academic dishonesty to the Dean of Students for disciplinary action. In the event disciplinary measures are imposed on the student, it becomes part of the students' official school records. Also, please note that the handbook obligates you to report all observed cases of academic dishonesty to the instructor.

Students Rights and Responsibilities. To know and understand the policies that affect your rights and responsibilities as a student at UT Tyler, please follow this link:
<http://www.uttyler.edu/wellness/rightsresponsibilities.php>

Grade Replacement/Forgiveness and Census Date Policies. Students repeating a course for grade forgiveness (grade replacement) must file a Grade Replacement Contract with the Enrollment Services Center (ADM 230) on or before the Census Date of the semester in which the course will be repeated. Grade Replacement Contracts are available in the Enrollment Services Center or at <http://www.uttyler.edu/registrar>. Each semester's Census Date can be found on the Contract itself, on the Academic Calendar, or in the information pamphlets published each semester by the Office of the Registrar.

Failure to file a Grade Replacement Contract will result in both the original and repeated grade being used to calculate your overall grade point average. Undergraduates are eligible to exercise grade replacement for only three course repeats during their career at UT Tyler; graduates are eligible for two grade replacements. Full policy details are printed on each Grade Replacement Contract.

The Census Date is the deadline for many forms and enrollment actions that students need to be aware of. These include:

- Submitting Grade Replacement Contracts, Transient Forms, requests to withhold directory information, approvals for taking courses as Audit, Pass/Fail or Credit/No Credit.
- Receiving 100% refunds for partial withdrawals. (There is no refund for these after the Census Date)
- Schedule adjustments (section changes, adding a new class, dropping without a "W" grade)
- Being reinstated or re-enrolled in classes after being dropped for non-payment
- Completing the process for tuition exemptions or waivers through Financial Aid

State-Mandated Course Drop Policy. Texas law prohibits a student who began college for the first time in Fall 2007 or thereafter from dropping more than six courses during their entire undergraduate career. This includes courses dropped at another 2-year or 4-year Texas public college or university. For purposes of this rule, a dropped course is any course that is dropped after the census date (See Academic Calendar for the specific date).

Exceptions to the 6-drop rule may be found in the catalog. Petitions for exemptions must be submitted to the Enrollment Services Center and must be accompanied by documentation of the

extenuating circumstance. Please contact the Enrollment Services Center if you have any questions.

Disability/Accessibility Services. In accordance with Section 504 of the Rehabilitation Act, Americans with Disabilities Act (ADA) and the ADA Amendments Act (ADAAA) the University offers accommodations to students with learning, physical and/or psychological disabilities. If you have a disability, including non-visible a disability diagnosis such as a chronic disease, learning disorder, head injury or ADHD, or you have a history of modifications or accommodations in a previous educational environment you are encouraged to contact the Student Accessibility and Resources office and schedule an interview with an Accessibility Case Manager. If you are unsure if the above criteria apply to you, but have questions or concerns please contact the SAR office. For more information or to set up an appointment please visit the SAR webpage (<http://www.uttyler.edu/disabilityservices/>) or the SAR office located in the University Center, Room 3150 or call 903.566.7079. You may also send an email to saroffice@uttyler.edu.

Student Absence due to Religious Observance. Students who anticipate being absent from class due to a religious observance are requested to inform the instructor of such absences by the second class meeting of the semester.

Student Absence for University-Sponsored Events and Activities. If you intend to be absent for a university-sponsored event or activity, you (or the event sponsor) must notify the instructor at least two weeks prior to the date of the planned absence. At that time the instructor will set a date and time when make-up assignments will be completed.

Social Security and FERPA Statement. It is the policy of The University of Texas at Tyler to protect the confidential nature of social security numbers. The University has changed its computer programming so that all students have an identification number. The electronic transmission of grades (e.g., via e-mail) risks violation of the Family Educational Rights and Privacy Act; grades will not be transmitted electronically.

Student Standards of Academic Conduct. Disciplinary proceedings may be initiated against any student who engages in scholastic dishonesty, including, but not limited to, cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.

i. “Cheating” includes, but is not limited to:

- copying from another student’s test paper;
- using, during a test, materials not authorized by the person giving the test;
- failure to comply with instructions given by the person administering the test;
- possession during a test of materials which are not authorized by the person giving the test, such as class notes or specifically designed “crib notes”. The presence of textbooks constitutes a violation if they have been specifically prohibited by the person administering the test;

- using, buying, stealing, transporting, or soliciting in whole or part the contents of an unadministered test, test key, homework solution, or computer program;
- collaborating with or seeking aid from another student during a test or other assignment without authority;
- discussing the contents of an examination with another student who will take the examination;
- divulging the contents of an examination, for the purpose of preserving questions for use by another, when the instructor has designated that the examination is not to be removed from the examination room or not to be returned or to be kept by the student;
- substituting for another person, or permitting another person to substitute for oneself to take a course, a test, or any course-related assignment;
- paying or offering money or other valuable thing to, or coercing another person to obtain an unadministered test, test key, homework solution, or computer program or information about an unadministered test, test key, home solution or computer program;
- falsifying research data, laboratory reports, and/or other academic work offered for credit;
- taking, keeping, misplacing, or damaging the property of The University of Texas at Tyler, or of another, if the student knows or reasonably should know that an unfair academic advantage would be gained by such conduct; and
- misrepresenting facts, including providing false grades or resumes, for the purpose of obtaining an academic or financial benefit or injuring another student academically or financially.

ii. “Plagiarism” includes, but is not limited to, the appropriation, buying, receiving as a gift, or obtaining by any means another’s work and the submission of it as one’s own academic work offered for credit.

iii. “Collusion” includes, but is not limited to, the unauthorized collaboration with another person in preparing academic assignments offered for credit or collaboration with another person to commit a violation of any section of the rules on scholastic dishonesty.

iv. Your essay will be examined by a program to detect plagiarism or non-original student work. The program checks your work against a comprehensive database of source material including previous students’ work and other papers and materials found on the web. An originality report will be generated that indicates the percentage of non-original material (text that matches existing sources) found in your paper. The purpose of using this software is to ensure you are writing original papers and to encourage you and all students to properly attribute all sources used.

UT Tyler Resources for Students

- UT Tyler Writing Center (903.565.5995), writingcenter@uttyler.edu
- UT Tyler Tutoring Center (903.565.5964), tutoring@uttyler.edu
- The Mathematics Learning Center, RBN 4021, this is the open access computer lab for math students, with tutors on duty to assist students who are enrolled in early-career courses.

Course Schedule

Module 1: August 23th – September 5th

Read Chapter 1

Read the following sections from Chapter 2: 2-1 to 2-4; 2-12 to 2-14

Module 2: September 6th – September 19th

Read the following sections from Chapter 3: 3-1 to 3-9 (stop at bottom of Pg. 73)

Read Chapter 6

Quiz 1 – Due September 26th (covers Modules 1 & 2)

Module 3: September 20th – October 3th

Read Chapter 7

Module 4: October 4th – October 17th

Read Chapter 8

Quiz 2 – Due October 24th (covers Modules 3 & 4)

Module 5: October 18th – October 31st

Read Chapter 14

Module 6: November 1st – November 14th

Read Chapter 16

Read the following sections from Chapter 18: 18-1 to 18-9

Quiz 3 – Due November 29th (covers Modules 5 & 6)

Module 7: November 15th – December 4th

Read material on drones/UAS

Read Chapter 20

Thanksgiving Break November 22nd – 27th

Study Day – December 6th

Final Exam – Opens: December 7th – Closes: December 9th

This exam will be a comprehensive final, covering all modules.

Essay – Due December 9th

Module lectures and course material will remain available for the duration of the course. The instructor reserves the right to amend the syllabus including revising assignments, tentative schedule and evaluation as necessary.