LOUISIANA TECH UNIVERSITY
Department of Professional Aviation

FLIGHT OPERATIONS
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SAFETY PROCEDURES AND PRACTICES, POLICIES, AND STANDARD OPERATING PROCEDURES

September 21, 2009

Change 15, September 1, 2022

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Summary of Changes (Changes marked with vertical line at left margin.)

1—General.
- Added consequences for solo students who fail to return on time for any reason unrelated to safety.

2—Safety. None.

3—Servicing. None.

4—Inoperative Equipment. None.
- Revised battery maintenance and replacement fees.

5—Emergencies. None.

6—Standardization and Flight Safety
- Use of parking Spot 4 now requires Chief Instructor approval.
- Added guidance for engine run-up/pre-takeoff checks at KRSN when operating on Runway 36.
- Added directive to ensure AA batteries are not discarded in the cockpit, and added guidance to ground aircraft if such batteries are known by the crew to be lost in the cockpit.
- Added guidance on checklist responses marked "As Required" in checklists.
- Added directive to minimize overflights of Squire Creek in the northeast practice area.
- Added directive for pilots to cease slamming Skyhawk doors.
- Added information on PA-28R NAV LIGHT use causing gear lights to dim.
- Prohibited PA-28R emergency landing gear extension (for training).

Appendices.
- Photo in Appendix 2 altered to reflect Tech parking spots on the old south ramp.

REVISIONS

Subject	Pen and Ink Revisions Revision #	Date

Table of Contents

SECTION 1: GENERAL FLIGHT OPERATIONS INFORMATION, POLICIES, AND ADMINISTRATIVE GUIDANCE

INTRODUCTION

This manual contains the policies and procedures to be followed during flight training at Louisiana Tech University (Tech). Except where otherwise noted, it is directive in nature. The objectives of this manual are to help Louisiana Tech University pilots maintain high standards of aviation safety, to improve the efficiency of training operations, to comply with 14 CFR 141.93, and to answer common questions in advance.

The overarching safety philosophy of our organization is: Accept no unnecessary risk. In our setting, the operation of single-engine aircraft by relatively inexperienced pilots is considered necessary. However, we will only accept that risk from the following start point: The aircraft is airworthy; the pilots are properly trained, endorsed, supervised, and/or rated; and the aircraft is operated within the strictures set by this manual and its manufacturer. The observance by all Tech personnel of applicable Federal Aviation Regulations and other FAA guidance, such as NOTAMs, the Aeronautical Information Manual, and Advisory Circulars, is assumed.

This manual will be made available to students prior to or upon their first meeting with their assigned flight instructor, along with an open-book test on select subjects contained herein which must be completed prior to their second meeting. Prior to flight training, a review of the test will be conducted. Students enrolling in the Commercial pilot course will take a second, advanced test on subjects contained herein. In the comparatively rare event of a new (to Tech) student starting directly in the Commercial course, both tests are required.

Since this is a collegiate setting, "student" is used throughout this manual in place of "trainee" or "client." "Student" in this context means "the individual receiving training," not necessarily "holder of a Student Pilot certificate."

This is a training environment. While Louisiana Tech University flight instructors and students are expected to encounter day-to-day challenges, safety is always our first priority. Ideas, suggestions, or recommendations are encouraged and should be presented to the Chief Instructor.

ENGLISH LANGUAGE

English is the International Civil Aviation Organization standard language. English proficiency is required for the issuance of FAA pilot certificates. No other language will be used during flight training at Louisiana Tech University. Additionally, English language proficiency is an ongoing FAA emphasis item. If an instructor detects an English language deficiency in a student, that student will be referred to the Chief Instructor, who will in turn refer the student to the Bulldog Achievement Resource Center (BARC) for assistance.

"He, She, His, Her"
The English language does not offer a gender-neutral singular pronoun (aside from "it"). Given the awkwardness of repeatedly writing "he or she," or "his or her," this manual will generally

default to the male form. Unless otherwise specified, all such usages apply to all personnel. No gender discrimination is intended, nor tolerated, by Louisiana Tech University.

USE OF LOUISIANA TECH UNIVERSITY AIRCRAFT

The aircraft operated by Louisiana Tech University, to include any that may be leased, are considered government-owned airplanes. The insurance coverage for our aircraft and pilots is dictated by the State of Louisiana. Tech's insurance covers only those personnel that are students, employees, or faculty of the Professional Aviation and Aviation Management programs of Louisiana Tech University. Only Louisiana Tech University students presently enrolled in a Tech course, faculty, flight instructor and dispatcher employees, FAA personnel (on official business), and authorized ferry pilots (whose employers assume possession of the aircraft) are authorized to fly in Louisiana Tech aircraft. Deviations from this policy require approval in writing by the Professional Aviation Department Head. Only those personnel listed above are approved to fly in Louisiana Tech University training aircraft. Deviation without Department Head approval will result in penalties as deemed appropriate. Those penalties may include expulsion from the aviation program or suspension from Louisiana Tech University.

Observers are encouraged to fly with qualified pilots on certain local and cross-country flights. Pilots acting as safety pilot require at least a Private Pilot certificate. Absent express Chief Instructor permission, personnel lacking a flight instructor certificate will not fly in Tech aircraft with Student Pilot certificate holders.

ENROLLMENT CERTIFICATE

Louisiana Tech University will, at the time a student is enrolled in a training course, furnish the student with a certificate of enrollment containing the name of the course in which the student is enrolled, and the date of that enrollment. Training course outlines and safety procedures and practices are furnished at the website listed below.

TSA ENDORSEMENT AND TSA INITIAL/RECURRENT SECURITY AWARENESS TRAINING PROGRAM

Louisiana Tech and its flight instructors will comply with 49 CFR 1552. An AOPA checklist summarizing, and an AOPA article detailing, the TSA requirements can be accessed online at: https://www.aopa.org/advocacy/pilots/alien-flight-training-program/aopas-guide-to-tsas-alien-flight-training-citizenship-validation-rule .

TSA Training
Each flight instructor, student worker, administrative coordinator, and dispatcher is required to complete the Transportation Security Administration (TSA) initial security training program (General Aviation Security) and present the completion certificate to the Administrative Coordinator. The website for the training is http://flash.aopa.org/asf/gasecurity/gasecurity.cfm . Recurrency is annual and will be tracked in Talon/ETA as a Currency. Recurrency consists of reviewing the slides on the Tech Aviation website under "Important Documents," and reporting such to the Administrative Coordinator.

TSA Approval for Aliens
Prospective flight students lacking U.S. citizenship will coordinate directly with the Chief Instructor or Department Head. TSA requirements for these individuals are specified by the Flight Training Screening Program (FTSP), and will be met prior to enrollment in a flight course.

TSA Endorsement for U.S. Students
During initial enrollment at Tech, each U.S. citizen, regardless of flight training or endorsements received elsewhere, will present evidence of citizenship as listed below, using original documents. A copy of the document(s) used to prove citizenship will be made and placed in the student's training record, to be retained for five years. The assigned instructor will then make the below endorsement in both the instructor's and the student's logbook.

> **"I certify that [name of student] has presented me a [insert document type(s)] establishing that [he or she] is a U.S. citizen or national in accordance with 49 CFR 1552.3(h).   [Date/Signature/CFI Number and Expiration]"**

Only the following documents (or combinations, as applicable) are accepted as evidence of U.S. citizenship:

1. Unexpired U.S. passport. The U.S. Passport Card <u>does</u> meet this requirement.
2. Original birth certificate of the United States, American Samoa, or Swains Island, <u>and</u> government-issued picture ID.
3. Original certification of birth abroad with raised seal (Form FS-545 or DS-1350) <u>and</u> government-issued picture ID.
4. Original certificate of U.S. citizenship with raised seal (Form N-560 or N-561) or Certificate of Repatriation (Form N-581) <u>and</u> government-issued picture ID.
5. Original United States naturalization certificate with raised seal (Form N-550 or N-570) <u>and</u> government-issued picture ID.

TALON EDUCATION TRAINING ADMINISTRATION (ETA)

Talon/ETA is an Internet-based computer administration system used for many of the functions of Flight Operations. The Administrative Coordinator intakes new personnel into the ETA system prior to their first flight, issuing a username, password, and PIN. The Chief Instructor and Assistant Chief also act as Talon/ETA administrators. Students will select their own passwords, but will not alter their PINs.

New personnel will input their emergency contact information to Talon/ETA. The emergency contact will be that person the pilot wishes to be contacted in the event of an aircraft accident or incapacitating illness or injury.

Scheduling of training is accomplished via Talon/ETA. Further scheduling rules and information are listed below.

Talon/ETA contains the Private, Instrument, Commercial, and Flight Instructor courses.

Printing Gradesheets
The printing of ETA gradesheets for inclusion in student training folders is required only for stage checks. Student daily flight training records are kept electronically.

In an effort to standardize the appearance of student training folder contents, instructors will please refrain from selecting "PRINT ACTIVITY DETAILS" during the Activity Completion process. Accomplish printing as follows.

1. At the final step of Activity Completion, prior to selecting "FINISH," select "PRINT ACTIVITY DETAILS IN PDF."
2. A secondary window will open displaying the gradesheet in a landscape orientation, with the printer dialogue to the right.
3. Destination. Select the applicable printer.
4. Select "More settings." Set "Pages per sheet" to "2."
5. Under "Two-sided," check "Print on both sides" and select "Flip on short edge."
6. Select "Print."
7. Collect and inspect grade sheet.
8. Close out grade sheet window.
9. Select "FINISH"

Printing the grade sheet after the fact from the student's Talon/ETA Training Record may sometimes be required. Accomplish as follows.

1. Find applicable student under "Personnel." Select "Training Records."
2. Select 'D' on the desired line.
3. Select "PRINT GRADE SHEET."
4. Utilize Steps 2 through 7 above.
5. Select "CLOSE."

Administrative Notes
CFIs and students do not use the Administrative Coordinator's HP printer unless color printing is required. Routine printing of Talon gradesheets by personnel other the Chief Instructor and the Administrative Coordinator is to be accomplished on the printer in the flight planning room.

Manual gradesheets will be used during periods of Internet outage. Maintain the gradesheet in the student's training folder until Talon activity completion can be accomplished.

Rental and Refresher Sorties
Non-syllabus dual sorties are called "Refresher" flights in Talon/ETA. Non-syllabus flights without a CFI are considered "Rental."

Refresher sorties are not appropriate for use with a student who is already enrolled in a course, even if that student has been inactive for a while. Such a student will be scheduled on repeats of the applicable TCO Unit, as needed.

Rental sorties by students are rarely required. See the Chief Instructor if a Rental is needed.

SECURITY

The doors of the Flight Operations Center are intended to be locked at all times. The west door and the northeast door can and should be opened utilizing the card swipe pads installed adjacent to the doors. Faculty and staff University ID cards are programmed to open the doors 24 hours a

day. Student ID cards are programmed to open the doors 0700-1700L, Monday-Saturday, excluding holidays, when the University is in session.

Personnel entering Flight Ops will not allow any person not personally known to them to "piggyback" through the doors. Additionally, students will not allow visitors in the building without permission from a Tech employee.

Metal keys are only issued to the Chief and Assistant Chief Instructors, faculty, dispatchers, and the administrative coordinator.

Personnel will ensure all doors are locked when the Flight Operations building is unoccupied.

Students requiring access to Flight Ops after 1700L will contact their CFI, or call 318-257-5080. (Solo students requiring building entry from the ramp side after 1700L may simply knock.)

Dispatchers will physically check the security of all five Flight Ops doors prior to going off duty.

CFIs conducting training outside of scheduled dispatcher work hours are personally responsible for building security.

Tech aircraft will be locked when not in use. Aircraft keys will be kept in a locked file cabinet when Flight Operations is closed or operating without a dispatcher.

Tech pilots will not utilize the exterior northern door of Davison Hall, Room 110, for exit except in case of emergency.

STUDENT RESPONSIBILITIES

Prior to the start of flight training, students must provide proof of U.S. citizenship or TSA approval as detailed above.

Students must sign the Louisiana Tech University Flight Training Agreement form, prior to beginning flight training. Additionally, students must agree in writing to the Aviation Department's Drug Policy.

Students are charged for flight training over and above University tuition. This is done via a debit account, referred to as a "flight account." This account must be set up with Flight Operations personnel before the University Comptroller can accept funds into it. Students are responsible for maintaining a flight account balance of $500 or greater, and are grounded if their balance is less than $500. Flights by students with less than a $500 balance are conducted only with express Chief Instructor permission. Flight account withdrawals are discouraged, and require the permission of the Department Head.

Professional Aviation major students need a First Class Airman Medical Certificate for enrollment in the flight training program. This is a one-time requirement to verify no unknown conditions exist that could preclude the student from attaining long-term aviation goals. Personnel not majoring in Professional Aviation need, if they intend to solo, a Third Class Airman Medical Certificate for enrollment into the flight training program. A list of FAA

Aviation Medical Examiners (AMEs) is available on the FAA's website. With certain AMEs, the FAA MedXPress website may be used to streamline the medical application process.

Students will be assisted in obtaining an FAA Student Pilot certificate by their assigned flight instructor, utilizing the Integrated Airman Certification and Rating Application (IACRA) system. IACRA is a web-based certification/rating application that guides the user through the FAA's airman application process. IACRA helps ensure applicants meet regulatory requirements through the use of extensive data validation. It also uses electronic signatures to protect the information's integrity, eliminates paper forms, and allows printing of temporary certificates. Names should be input to IACRA as they appear on official government identification cards, and students are to made aware that these will be quite difficult to change later.

Students will arrive promptly for scheduled instructional activities. Failure to arrive on time for a flight lesson may result in a "NO SHOW" charge (see below) being assessed to the student's flight account. It is paramount that, if a student is unable to keep an appointment with his flight instructor, the flight instructor and dispatcher be notified in advance as soon as possible. Flight line activities are to be deconflicted with academic classes. The student will ensure that instructional activities are not scheduled at a time that will interfere with academic classes. Students who are unable to be present when an aircraft is scheduled must notify the dispatcher as early as possible so that the airplane can be rescheduled.

Students are not allowed into the Records Room. However, they may review their training records online. If a student desires a paper copy of his/her training record(s), it must be requested from the Administrative Coordinator.

Prior to flight, the student will fill out a weight and balance/performance planning/flight plan form. The completed form will be reviewed by the approving authority for the flight. Aircraft are not dispatched without the form, which is obtained at the dispatch counter.

It is the pilot in command's responsibility to determine the airworthiness of the aircraft. Students flying solo are pilot in command.

Students will alert the instructor or dispatcher to any discrepancies found on an aircraft during preflight inspections, or during or after flight. It is the student's responsibility to ensure that, before and after each flight, the aircraft is correctly serviced with fuel and oil, and that the windscreen is clean. After each flight, the pilot in command will ensure that no trash is left behind in the aircraft. Failure to police the aircraft will result in the pilot in command being recalled and required to accomplish this.

Students will verify the aircraft's Hobbs meter reading prior to engine start, and immediately report any discrepancy to the dispatcher.

Students who become actively airsick are directly and personally responsible to clean the aircraft's interior and, if applicable, exterior to the satisfaction of the Chief Instructor. Failure to do so will result in removal from the flight program.

Students are not allowed inside Flight Operations unsupervised. Students do not go behind the dispatch counter unless authorized. Students are not allowed to self-dispatch an airplane.

Students are reminded that Louisiana Tech University Flight Operations <u>closes</u> at 2100L (2200L in summer), except for Friday and Saturday, when it closes at 1700L. Student solo flights <u>will</u> return in time to complete any post-flight duties and <u>exit the building by closing time</u>, unless special arrangements are made <u>in advance</u> with the Chief Instructor or in case of emergency. Failure to do so will result in the student being grounded for one week and charged fees, akin to No Show charges.

Students, for obvious reasons, need a telephone. It is strongly recommended to set up voicemail, to preclude missing a call from Flight Operations. Flight Operations does not generally repeat calls to students who lack voicemail, and Flight Ops does not text students.

Students must maintain current aviation publications. In particular, students must use caution with used, second-hand publications, which may be outdated.

Students flying solo sorties in Stages 1 or 2 of the Commercial course are to be the <u>sole occupant</u> of the aircraft—no "stick buddies" are authorized.

Students are required to maintain a college grade point average (GPA) of 2.5. Students whose GPA falls below 2.5 will be referred to the Department Head.

Students are required to comply with aircraft checklists. Of particular note is the requirement to turn the MASTER and STBY BATT switches OFF when securing the aircraft after flight. If failure to accomplish either of these steps results in a requirement to have either the main battery (any aircraft) or standby battery (G1000 C-172S) recharged or replaced, the student will be responsible to reimburse the University for maintenance charges associated with battery maintenance or replacement, as detailed in Section 4 below.

Flight Training Course Completion Times
Louisiana Tech University flight students are intended to complete their flight courses (PRAV 110, 111, 242, 243, 342, 343, 344, and 411) in the quarter in which they register for them. Students who fail to complete the flight course for which they are registered in the quarter in which they registered for it will be allowed the next four succeeding quarters to complete it. After that, a grade of 'F' will be awarded for that course. If the student wishes to continue flight training after that, they will be required to register for that flight course again. In the case of serious issues (health, family, or financial), exceptions may be allowed.

Students who are presently on an Incomplete grade (for a flight course) will not register for flight courses that they have no reasonable hope of completing in that quarter. Students who have more than one Incomplete flight course on their transcript <u>will not</u> sign up for additional flight courses. Exceptions to this policy require the Chief Instructor's signature on the advising form.

FLIGHT INSTRUCTOR RESPONSIBILITIES

Flight instructors are responsible for the safety of students during their flight lessons; on dual flights, the instructor is the pilot in command (PIC) except in the rare case of a flight instructor who does not hold a valid medical certificate. (Operations by CFIs who lack a medical require approval by the Chief Instructor.) The Department considers the Tech flight instructor to be the <u>Safety Officer</u> for any flight with which he or she is involved, be it dual training or student solo.

Instructors will follow the guidance in this manual. Failing to adhere to Louisiana Tech University and Department of Professional Aviation policies and procedures may result in disciplinary action or termination of employment.

Prior to flight training commencing, the instructor will ensure that the student's TSA information has been received, verified, and documented in Talon/ETA along with the applicable endorsement being placed in the student's logbook. Note that a prior CFI or flight school's endorsement does not meet this requirement.

Flight instructors should be aware that some physical handicaps do not necessarily prohibit pilot certification. If a student's ability to hold a medical is questionable, the flight instructor should advise the student that assistance in obtaining a medical certificate is available through the cooperation of the Airman Medical Examiner (AME) and the local FAA Flight Standards District Office (FSDO). However, this assistance is available only when requested specifically by the person seeking the medical certificate.

Flight instructors will assist their newly assigned students in obtaining an FAA Student Pilot certificate, utilizing the Integrated Airman Certification and Rating Application (IACRA). Instructors should review the current version of FAA Advisory Circular 61-65 for details.

Except for initial solo (Dual-Solo), no pre-Private solo flights are authorized to be conducted outside normal business hours. The instructor is required to brief each flight lesson and follow the appropriate training course outline for each ground or flight lesson. Instructors are responsible for maintaining student training records. Our organization is overseen by representatives of the Federal government. Documentation matters. Act accordingly.

Talon/ETA record-keeping is to be completed on the day the activity is accomplished. Late activity completions can result in students achieving negative balances in their flight accounts. Louisiana Tech University flight students will not be indebted to the University; this is unsatisfactory, and it results in the student being grounded. CFIs having Activity Completions more than <u>two</u> days in arrears will be grounded. CFIs scheduling flight periods greater than 2.0 hours will check their student's flight account balance prior to flight.

Transitioning from part-time employment to full-time requires the CFI to hold a four-year college degree (in hand), as well as an FAA flight instructor certificate with Airplane Single Engine and Instrument ratings.

Training Course Outline (TCO) Adherence and Logging of Course Minimums
14 CFR 141 TCOs are approved by the FAA and are intended to be directive in nature. It is incumbent on instructors to accurately log student accomplishment of aeronautical experience requirements, in both the student's logbook and in Talon/ETA.

Students will not graduate Louisiana Tech University Part 141 courses unless Talon/ETA reflects that every unit in the course is complete (or legitimately omitted), and unless the course minimums recorded in Talon ETA reflect the minimum times and events listed in Paragraph 4 and, when applicable, 5 of the applicable Appendix (B, C, or D) of 14 CFR 141. Proceeding to an intermediate stage check without meeting stage minimums requires Chief Instructor approval. Omitting Units requires Chief Instructor approval.

Louisiana Tech University instructors and student will conduct Private, Instrument, and Commercial flight training in the resource (airplane or device) specified by the TCO for the applicable unit. Absent Chief Instructor approval, TCO-directed AATD training units will not be conducted in the airplane, regardless of student (to include VA student) or instructor preference. Such approval is unlikely except in the case of training device malfunctions. The statement "When necessary or desired, FTD events may be completed in the aircraft.", which appeared in the older TCOs, is deleted.

Grading TCO Units
CFIs who grade an activity overall less than 'Good' (or less than 'B' on a stage check) will comment on the line item(s) that drove the grade. The explanation should be brief, but thorough. CFIs grading an activity 'U' ('F' on stage checks) will print out the Talon gradesheet, and have the student sign it. The act of the student signing the gradesheet represents the student's acknowledgement, not necessarily agreement.

CFIs should (generally) refrain from grading two successive flights (or, if applicable, simulator lessons or orals) 'Fair.' 'Fair,' as an overall grade, means that normal progress is not occurring. Typically, that progress either will occur on the next unit (Good overall), or it will not (Unsatisfactory overall).

When a student fails a stage check, remediation is almost always needed. CFIs must note which items were failed, and remediate them on a Unit (in that same TCO) which contains those line items, ensuring said items are covered and meet standards in Talon/ETA before the student re-checks. If this is not done, then Talon will say that "line items required for this event are not accomplished" when the check instructor attempts to schedule the re-check.

Course minimums
Louisiana Tech University CFIs fill in the Minimums page when Activity Completing units. For example, PIC, Night, Simulated Instrument, Cross-country, etc. all must be logged in Talon/ETA, so that the student's record reflects meeting TCO minimums at course completion.

Procedures for Scheduling a Practical Test
Instructors schedule practical tests for their students. (Students should generally not call DPEs directly, unless real-time coordination is required.) Practical tests will be scheduled so as to reduce inconvenience as much as possible for all parties concerned.

1. Flight instructor completes student training for pilot certificate or rating sought.
2. Flight instructor ensures the student pilot has completed the associated FAA Knowledge Test (if applicable), and places a photocopy of the report in the student's training folder.
3. Flight instructor verifies all training documentation is complete and correct, then requests a course graduation certificate from the Chief Instructor.
4. Flight instructor completes (or assists student in completing) all required documentation including Integrated Airman Certification and Rating Application (IACRA).
5. Flight instructor contacts Chief Instructor for student School Affiliation and Course Association in IACRA. (See Section 6 for additional IACRA information.)
6. Flight instructor schedules the FAA Practical Test with the Designated Pilot Examiner. Exception: CFI applicants may self-schedule with the FSDO or DPE, as applicable.

Administrative Preparation for Practical Tests
(See Section 6 for additional information on practical test preparation.)

Louisiana Tech University flight instructors do an excellent job of ensuring that their students, when tested, are found prepared to meet or exceed the FAA airman certification and practical test standards (ACS/PTS) in both knowledge and skill. This fact is noted and appreciated by the Professional Aviation Department Head, the faculty, and the Chief Instructor, as well as by the Designated Pilot Examiner (DPE) community and the FAA. With that said, we must always do things right, to reduce stress on "checkride day" for all involved (the student, the endorsing instructor, the school, and the examiner).

For the present purposes, "student" and "applicant" are used in interchangeably, as are "practical test" and "checkride." All references to "DPE" include FAA aviation safety inspectors (ASIs).

CFIs need to remember that their students have very limited knowledge of how a practical test "should" go. (It should go smoothly.) Every flight instructor has had at least four practical tests in his/her life; students have had very few (or zero, for Private Pilot applicants). Plan accordingly, and allow time to prepare the student for success.

Items 1 through 4 below comprise a list of what is required for a student to be really ready (administratively) for a practical test. The list was extracted from the old Practical Test Standards (PTS), but is still applicable. Largely, the instructions presume that the student is being required to travel away from Ruston to get the practical done.

1. AIRCRAFT
   a. Aircraft Documents: The student will be instructed to personally view the registration, airworthiness certificates, and AFM of the aircraft to be used during the preflight inspection on the day of departure.
   b. Aircraft Maintenance Records and Logbook Record of Airworthiness Inspections and AD Compliance: DPEs and ASIs are required to verify an aircraft's airworthiness prior to riding in it. The CFI will show the student precisely where in the aircraft logs the "AV1AATES" items are located, and have them tabbed. Additionally, the CFI will request from the dispatcher an RMS "Events" printout, and the CFI and student together will compare the printout to the actual aircraft log, immediately reporting any discrepancies to the Chief Dispatcher or Chief Instructor.
   c. If an early morning departure is required, CFIs will coordinate with dispatch to ensure the desired airplane is reserved and full of fuel. In winter, request that Ruston Aviation hangar the aircraft, to preclude delay due to frost on the lifting surfaces.

2. PERSONAL EQUIPMENT
   a. The CFI will physically ensure that the student has all the following in his/her possession on practical test day: view-limiting device, current and appropriate publications and aeronautical charts, computer and plotter, and flight planning forms.
      i. iPad apps can be used to comply with most of the above. However, some DPEs may still have a strong preference for paper products, while others may require a paper backup to the computer.

b. In addition to possessing the items in 2a above, applicants need the <u>abilities</u> to: use performance charts from the POH; measure courses on a chart; decipher navigation charts <u>without</u> reference to the legend; <u>rapidly</u> locate information in the aircraft information manual, AIM, and Chart Supplement; and <u>apply</u> provided weather information to their particular cross-country plan. Also of note, with reference to cross-country planning, is that DPEs normally expect the applicant to know <u>where</u> on the airfield they plan to go after landing, down to the level of which FBO they will use. A truly thorough planning job would even include whether the planned FBO has a courtesy car, what the fuel costs, and what maintenance capabilities are available. (Such information is readily had via Internet resources.)

3. PERSONAL RECORDS
   a. The CFI will physically ensure the student has all the following in his/her possession on practical test day: government issued photo ID, FAA pilot certificate and medical certificate, completed FAA Form 8710-1, knowledge test report, pilot logbook with appropriate endorsements, FAA Form 8060-5, Notice of Disapproval (if applicable), school graduation certificate (if applicable), and examiner's fee (if applicable).
   b. The student's photo ID, pilot certificate, and medical certificate will be photocopied front and back (in color, if possible) on a single sheet of paper (again, if possible). Note that the DPE is required by regulation to view the original documents, so present the copies <u>and</u> the originals at the same time.
   c. Print out and sign the IACRA-generated paper FAA 8710-1 form. This exercise should be unnecessary, but will be done so that a ready-to-go application form is available in the event of IACRA system problems. Additionally, students will bring along the original of their knowledge test report with the raised seal. Again, this is only needed in the event of IACRA malfunction.
   d. CFIs will, to the extent possible, put all the applicable endorsements on a single page of the logbook. Additionally, for ease of locating them, logbook endorsements should be tabbed, as should logbook entries reflecting events which are specifically required by regulation. (Such entries should cite which requirement they are fulfilling. For example, if a Student Pilot flies a 100 NM solo cross-country with landings at three points and one segment greater 50 NM, the logbook line should give mention to 14 CFR 141, Appendix B, Paragraph 5(a)[1].) Other examples of "tab-worthy" items include night flight time, simulated instrument time, and landings at a towered airport. The idea is to show the DPE that the applicant has, for sure, met the requirements for aeronautical experience for the particular certificate or rating. This is critical from the DPE's point of view, since the student's Tech flight training record does not accompany the student to the practical test.
   e. Additionally, CFIs will ensure that the student's logbook has the student's name, permanent address, and phone number written in the front. Every completed page of the logbook will be signed by the pilot.
   f. FAA Form 8060-5, Notice of Disapproval (if applicable) and approved school graduation certificate (if applicable), are vital. If the checkride is a "re-check," the absence of the Form 8060 would likely result in the practical not being conducted at all. The absence of the Tech Part 141 course graduation certificate would indicate to the DPE that the student trained under Part 61, which in most

cases has different (and higher) aeronautical experience requirements and invites still greater logbook scrutiny.

g. Examiner's fee. CFIs will determine for their student in advance what the DPE's fee is, and whether the DPE accepts checks. CFIs will visually ensure the student has the cash or check in hand prior to departure from Ruston.

4. BINDER. The loose page items from Item 3a above will be put together, in the order listed below, in some form of folder or binder, and will be presented together with the applicant's vital documents, logbook, and examiner's fee to the examiner immediately upon entry to his/her office.

a. Photocopy of photo ID, pilot certificate, and medical certificate
b. Completed FAA Form 8710
c. Knowledge test report (if applicable)
d. FAA Form 8060-5, Notice of Disapproval (if applicable)
e. Louisiana Tech University course graduation certificate (if applicable)

DPEs value their time highly, and dislike dealing with or having to create paperwork that could and should have been done prior to their meeting with the applicant. Practical tests are stressful events for students; dealing with improper paperwork makes the student look less competent and feel more nervous, both of which are undesirable. The intent of all of the forgoing is to make both student and DPE comfortable, while also assuring the DPE that both the CFI and the school are operating in a well-organized fashion. Outsiders like DPEs and ASIs only get infrequent snapshots of the hard work we do here at Tech—and they get that snapshot when we send them a certificate or rating applicant. Our goal must be for those DPEs and ASIs to agree with us that Louisiana Tech University's Professional Aviation program is properly titled.

Flight Instructor Instrument and Night Currency
Louisiana Tech University flight instructors maintain their currencies in accordance with 14 CFR 61.57. Instructors are provided, at no charge, up to three ATD hours monthly for the purpose of instrument currency. CFIs may log instrument currency in the Mentor ATD without supervision (by a fellow instructor).

Instructors are also provided airplane time for maintaining night PIC currency. These sorties should be accomplished locally and kept to minimum duration. Unless otherwise waived, CFIs who are non-current must fly these sorties with a Tech instructor who is night current. Non-current instructors may not gain currency with a Student Pilot in the other pilot seat.

Request scheduling of currency flight/sims from the Chief Instructor or Assistant Chief.

CFIs Taking PRAV 445
Professional Aviation 445, Introduction to Multi-crew Operations, is a required course for graduation. If crew practice in a device is or becomes part of this course, undergraduate flight instructors will be charged normal rates for their use of the device, paying from their flight account just like any other student. The allotted free device time mentioned above is not allowed to be used for PRAV 445.

Flight Review
Instructor proficiency checks count as flight reviews, assuming an appropriate ground review is done, and the sortie is at least one hour long.

CHECK INSTRUCTOR RESPONSIBILITIES

Check instructors are selected and trained flight instructors who conduct student stage checks at designated points in the courses. Check instructors are expected to assume responsibility for supervision of operations if they are the senior personnel present.

Check instructors review training folders prior to stage checks, and ensure they are in order. Check instructors print completed gradesheets upon check completion, and file them in the students training folder. Stage checks will include FAA ACS Special Emphasis Areas.

CHIEF INSTRUCTOR/ASSISTANT CHIEF RESPONSIBILITIES

Chief Instructor responsibilities are listed in 14 CFR 141.85. The Chief Instructor reports directly to the Head of the Department of Professional Aviation.

A check instructor will be appointed to serve in the role of Assistant Chief Instructor. This person's responsibilities are assigned by the Chief Instructor. In the event the Chief Instructor is unavailable, the Assistant Chief is empowered to act in his stead.

FLIGHT DISPATCHER RESPONSIBILITIES

Louisiana Tech University dispatchers are charged with utilizing Tech airplanes in the most prudent and productive manner to meet flight training objectives. Flight school dispatchers monitor the status of Tech's training airplanes. Proper dispatch procedures must be adhered to in every event.

A flight instructor must be present to dispatch an airplane to a pre-Private student.

Dispatch activities are critical for safety. Dispatchers may assign aircraft to practice areas for separation. They may be the first responder to an aircraft emergency, in which case they will follow the procedures in this manual. As with any other University employee, failing to report for work will result in counseling and/or termination of employment.

A Chief Dispatcher will be appointed by the Chief Instructor. He/she will be responsible for dispatcher duty scheduling and ensuring dispatcher functions are carried out. The Chief Dispatcher will coordinate with the Assistant Chief Instructor for input of aircraft to maintenance.

Dispatcher Duties
Normal dispatcher duties will include but are not limited to:

1. Flight following of Student Pilots operating solo
2. Security of aircraft and accounting for aircraft keys
3. Building security
4. Dispatch of aircraft
5. Assignment of practice areas
6. Maintenance of the dispatch and the flight planning rooms
7. Maintenance of flight/aircraft records
8. Talon/ETA and Resource Management System operations

9. Maintenance of the building's dehumidifier
10. Raising and lowering of the flags
11. Other duties as assigned by the Chief Instructor

OPERATIONS SUPERVISOR RESPONSIBILITIES

The Chief Instructor/Assistant Chief normally acts as Operations Supervisor. At any time the Chief Instructor/Assistant Chief is not present, the senior flight instructor present is designated as the Operations Supervisor whose duty it is to oversee flight operations.

No solo or PIC flight will be approved unless the following conditions are met: The student has in his or her possession a valid medical certificate and pilot certificate, along with the completed flight release form. The supervisor must also ensure that the student has checked the weather for the time and area, and determined that the weather meets or exceeds the minimums prescribed by this manual. The student must have the appropriate logbook endorsements and not violate any limitations of those endorsements. For cross-country flights, the supervisor must review the flight plan and determine that the student has at least $100.00 in cash or a valid credit card.

FLIGHT INFORMATION FILE (FIF) POLICY

All pilots are required to review, and electronically confirm in Talon/ETA, all material included in the Flight Information File binder at the dispatch counter prior to flight. FIF currency is required prior to aircraft dispatch. The Ops Check In feature of Talon will not work until an individual's FIF is confirmed. FIFs, generally, will be: a) updates to standard operating procedures and policies, b) announcements, or c) current operational information. FIFs, whether informational or directive, contain things the pilot needs to know; acknowledgment is required. If an event occurs that indicates an FIF was signed off by an individual, but not actually read, the Chief Instructor will take appropriate action.

FIFs are intended to be temporary. The policies will either expire and be deleted, or they will be incorporated into the appropriate document, by pen and ink or upon its republication.

FLIGHT OPERATIONS HOURS OF OPERATION

When Louisiana Tech University is in session, Flight Ops is open as follows:
 Monday through Thursday: 0700L-2100L. (Summer Quarter 0700-2200L.)
 Friday-Saturday: 0700L-1700L.

Sunday, Holidays, and when Louisiana Tech University is not in session:
 Dual only; instructors must self-dispatch. "Dual" includes Dual-Solo (initial solo).
 Other pre-Private solo flights are not authorized. Commercial course solos require a CFI to accomplish all normal dispatcher functions, and must be specifically authorized in advance by the Chief Instructor, either verbally or via FIF. (The Chief Instructor and the Admin coordinator are not dispatchers.)

Dispatchers will close Flight Operations upon completion of the last scheduled flight activity. Operating hours are subject to change without notice due to weather or lack of scheduled activity. Typically, Flight Ops will be shut one hour prior to the start time of a daytime home Tech football game.

Louisiana Tech University aircrews are prohibited from operating Tech aircraft between the hours of 12 o'clock midnight local time (0000L) and 6:00AM (0600L). This includes dual and solo, local and cross-country.

As noted above in the Student Responsibilities section, students operating aircraft without an instructor are obligated to return to Flight Ops, complete post-flight duties, and exit the facility by the time the dispatcher is scheduled to close. This applies regardless of what the student(s) may have planned for prior to departure. Students who fail to return on time for any reason unrelated to safety will be grounded for the succeeding seven days.

OPS CHECK IN

Students will report to the dispatcher for training as scheduled unless the Chief Instructor approves an absence. Dispatchers will complete the check-in function in Talon/ETA.

Instructors and students will contact the dispatcher if they will not be able to report for duty/training. A minimum of 24 hours notice is required, except in emergency instances. Sleeping in or forgetting are not excuses for missing training sessions. Failure to show up is equivalent to an unexcused absence from a University class.

SCHEDULING

The Louisiana Tech University flight instructor is charged with utilizing Louisiana Tech aircraft in the most prudent and productive manner to meet the flight training objective. Flights will be scheduled according to the training syllabus that the student is enrolled in. Two systems of activity scheduling are available. Aircraft are dispatched based on the priority system listed below.

CFI Self-scheduling Request System
Instructors will input to ETA their desired schedules for the next day not later than 1500L daily. Instructors must schedule such that their student completes the course in which they are enrolled by the end of the quarter.

Instructors may train two students during a training period, to meet education and flight training needs. This may improve the utilization of time and resources and can enhance student learning.

Block Schedule
The block schedule system may be instituted at any time. It is directive schedule, with limited flexibility for the individual. Under this system, the student is assigned set days/times to fly, which are the same each week.

In the block system, students are generally allotted two-hour time slots on the schedule, unless other arrangements are coordinated. The flight instructor will work out a schedule of availability with each of his/her students and turn it in to the Assistant Chief Instructor. Time slots will be assigned based on the times the instructor/student requested and the times that are available.

The block system can co-exist with CFI self-scheduling. It will generally be the norm for beginning students (PRAV 110), until they solo, and for Stage 1 Instrument students (PRAV 242).

Aircraft Scheduling Priorities
Schedule priorities apply under either the CFI request system or the block system. The issuance of aircraft is not first come, first served. The priority system below applies, regardless of when the sortie is put into Talon/ETA. Dispatchers will follow the priority system, regardless of when the mission was scheduled, or when the crew arrives at Flight Ops. Priorities will be as follows:

1. Sorties directed by the Chief Instructor
2. FAA practical tests
3. Instructor proficiency checks (Stan rides)
4. Stage checks
5. Pre-Private Solo cross-country flights, if the weather supports them
6. Dual student instruction for students under the Block Schedule
7. Other dual student instruction
8. Solo local flights and cross-countries by students in the Commercial Course

CFI training sorties have priority over Commercial course sorties, except for stage checks.

On Saturdays, dual cross-country flights have priority over dual local flights.

If the student does not show up to fly in a timely fashion, the student forfeits his/her position on the schedule. Students will inform their instructors if they cannot make the flight at the scheduled time so the instructor can make alternate plans and inform dispatch that they will not be using their scheduled time slot. If a student fails to show up for a flight, he/she will also incur a NO SHOW charge which will be deducted from their flight account, as described below.

No sortie, regardless of priority, will overfly required aircraft inspection times.

All aircraft will be returned as scheduled so as not to interfere with other training.

Priority Use of Resources by Faculty When Accomplishing Stage Checks or Advanced Training
Flight-rated faculty members have obligations that severely limit when they can accomplish student training activities. Faculty members needing to accomplish the following will have resource scheduling priority over everything except sorties directed by the Chief Instructor and FAA practical tests:
1. stage checks
2. progress and elimination checks
3. flight instructor training

Faculty members will be judicious and timely in their exercise of this privilege, and will inform the Assistant Chief Instructor when doing so. The Assistant Chief will inform affected flight instructors.

AATD Scheduling

AATD resources are limited and will be scheduled using the Google Flight Scheduling Board under the "AATD Schedule" tab. Schedules for the G1000 NXi and the G1000 NXi-RTD are labeled. Each week's schedule will be posted on Thursday of the week prior. CFIs will directly post their name and the student's name in the desired time slot as listed in the Google Sheet. If the AATD flight is a stage check, annotate it with "SC." For example, "Staten/Smith – SC." Check instructors may, if necessary, take priority and overwrite previously scheduled sims, so long as they provide 24 hours notice directly to the affected instructor.

CFIs are encouraged, when able, to work out AATD scheduling conflicts between or among themselves. If this fails, CFIs having a requirement to exercise priority as listed below will see or contact the Chief Instructor or Assistant Chief to request to have existing scheduled AATDs cancelled. CFIs will use discretion, and will exhaust other options, such as a different date/time to accomplish their needs, prior to making the priority request. Requests to use the priority system will be made not later that (NLT 48) hours before already-scheduled AATD times. CFIs who cancel scheduled AATD training are requested to immediately utilize suitable group messaging to notify their fellow instructors of device availability.

Priority for AATD use is similar to the scheduling priority of aircraft, as follows:
1. Device sorties directed by the Chief Instructor;
2. Stage checks;
3. Private Pilot TCO Units—The purpose of this priority placement is to strongly encourage instructors to conduct training Units in the order presented by the TCO;
4. CFII upgrade training—However, CFII upgrade training has priority only from 1900L to midnight each day;
5. Dual student instruction for students under the Block Schedule, in their assigned time blocks—Note: "Block Schedule," as used here, means students who are registered for PRAV 110 or 242 in the present academic quarter and were assigned a block by the Assistant Chief Instructor;
6. Other dual student instruction.

Arrow Scheduling

Complex airplane resources are limited. Pilots will strive to operate them as scheduled. Operating as scheduled means that the aircraft takes off at the start time indicated in Talon/ETA. In particular, these aircraft will be returned as scheduled, so that ensuing sorties can take off on time. Late returns will only be authorized if the late return of the aircraft does not impact another crew.

Scheduling complex airplane resources will take place on the Google Flight Scheduling Board under the "Arrow Schedule" tab. Each week's schedule will be posted on Thursday of the week prior. During normal operations with both airplanes in commission, CFIs (themselves) will input their name and the student's name in the desired time slot as listed in the Google Sheet.

During single-Arrow operations, supervisors will assume full control of scheduling. CFIs will make requests by (only) adding a comment to the desired time block as listed in the Google Sheet to include the instructor's name, student's name and what type of flight is to be conducted, such as practical test, CFI training, stage check, stan ride, or Commercial course Stage 3. For example, "Staten/Smith – SC." The supervisor will indicate approval by the inputting the names

into the Google Sheet based on the priority system. Notwithstanding short notice requests, the Chief or Assistant Chief will strive to accomplish approvals by close of business the day prior.

Whether both or only one of the Arrows is available is, obviously, critical. In the event that only a single complex airplane is available, CFIs will be so advised by suitable messaging. If the situation is known in advance, it will be made obvious by having the second Arrow schedule blacked out on the Flight Scheduling Board. If the situation occurs during a day when two-Arrow ops were anticipated and scheduled, SOP priorities will apply and CFIs will be advised of cancellation(s) in as timely a manner as possible, most likely by the dispatcher.

N24576
N24576 is restricted to VFR, and is not equipped for flight in Class B or C airspace.

CFIs intending to conduct required spin training in Skyhawk N24576 should advise the dispatcher well in advance, to preclude conflicts.

Students in Stage 2 of the Commercial TCO are authorized solo training flights in N24576 subject to the following conditions:

- Dual sorties have priority over solos.
- Flights are restricted to local, day, and VFR. Spins without an instructor aboard are prohibited.
- The student has previously operated N24576 in a satisfactory manner with a CFI aboard.
- The CFI awards the student the Talon/ETA Qualification "576." Prior to dispatching the aircraft to a solo student, the dispatcher on duty will ask the Chief Instructor, the Assistant Chief, or anyone present who has suitable Talon/ETA privileges to observe in Talon that the student possesses the Qualification.
- Pilots will add only enough fuel to achieve one-half tanks maximum (14 gallons per side, 28 total). The fuel order will be placed with precision. Measure the fuel in each tank with the fuel check tube and then specify to the lineman how much fuel to add to each wing. Pilots will honor the LOW FUEL light. If it illuminates (L and/or R) steady, the pilot will proceed direct to KRSN and land.
- Pilots are to utilize Form #27, Cessna 172R/S Checklist, in lieu of our normal multi-page Cessna Model 172S Checklist.
- Pilots are not obligated to accept being dispatched N24576. Dispatch may offer the aircraft, but students may, without penalty, decline it and elect to either wait for a G1000 "S-model" or cancel.

IFR Use of Aircraft Lacking a Current GPS Database
Pilots may operate aircraft lacking a current database under IFR, with the understanding that they cannot file as being GPS-equipped and must utilize VHF navigation as their primary. The weather for such sorties must support a visual approach upon return to Ruston Regional.

Early Returns
Flights that return prior to their scheduled arrival times should be Activity Completed in Talon/ETA immediately. Otherwise, the system may not acknowledge that the aircraft is available for use. If the authorizing CFI is not available, see the Chief Instructor.

Schedule Changes
Short-notice schedule changes create hardship for all involved. The Chief and Assistant Chief Instructors may make flight schedule changes necessary to meet priority training requirements.

Cancellations
Instructors and students are expected to meet all scheduled academic classes and training flights. Cancellations for other than emergency reasons require 24 hours notice. Acceptable reasons for not meeting a scheduled training flight include: illness, injury, or death in the immediate family. If applicable, the presentation of a doctor's excuse will be necessary. Excluding weather cancellations, no training will be cancelled without approval of the Chief Instructor or Assistant Chief. If a student must cancel a solo training flight due to conditions beyond their immediate control, the student will report this to the assigned flight instructor and the dispatcher.

INSTRUCTOR/STUDENT ASSIGNMENTS

Students will be assigned a flight instructor appropriately rated for the student's course of training. The Department will attempt to ensure that the student and instructor continue together until award of the certificate or rating sought. The Department reserves the right to make instructor assignment changes if necessary to meet the needs of the Department and/or to enhance learning and student progress.

All instructor/student assignments must be approved by the Chief Instructor. Students must understand the Department's requirement to evenly distribute students among instructors.

In the first week of each academic quarter, the Chief Instructor will meet with all flight students who are new to Louisiana Tech Professional Aviation. During this meeting, students will be assigned to a flight instructor based upon the foregoing policy.

Flight Instructor/Student Change
Flight instructor and student changes are usually not in the best interest of the student or the school. Changes interfere with continuity of the training, and affect other parties. Student and flight instructor changes require cause to be shown.

When a student requests a flight instructor change, the student will prepare a written request stating specific facts supporting and documenting the request. The written request will be submitted to the Chief Instructor.

The Chief Instructor or his representative will decide if the request is justified and a change warranted. Upon review of the facts, the Chief Instructor will either approve or disapprove the request. The Chief Instructor's decision is final.

Every effort will be made to accommodate student or flight instructor needs to ensure a satisfactory quality of training and progress. However, a change in assigned instructors could lead to a delay in training, due to the availability of flight instructors.

STAGE CHECKS

Stage checks are required by 14 CFR 141.55. These checks are conducted for the purpose of standardizing Tech's Professional Aviation product. Stage checks will be conducted in a non-

threatening and professional atmosphere. On stage checks other than course finals, check instructors are empowered to instruct as needed, so long as the student achieves the required standard on his own by the end of the mission. Stage checks are accomplished at designated points in all Louisiana Tech flight courses, even if training is done under Part 61. Grade assignment will be in accordance with the applicable TCO.

Students are expected to pass all scheduled stage checks. If the student does not pass a stage check, the check instructor will debrief the Chief Instructor and the assigned flight instructor. Remedial training will be assigned prior to repeating the stage check. Repeated stage check failures may result in removal from the flight training program, as noted below.

Final stage checks for the Private, Instrument, and Commercial courses are intended to mimic FAA practical tests. However, students failing the flight portion of any final stage check will repeat the entire stage check flight profile (as opposed to only repeating failed items).

Stage Worksheets
Students will complete applicable worksheets before being considered for stage checks. The assigned flight instructor will review and critique the student's work before recommending the student for a stage check. The original worksheet remains part of the student's training folder.

Stage Check Scheduling System
The scheduling stage checks other than course final stage checks utilizes Google Docs. Each Tech flight instructor will maintain a Gmail account. Upon hire, the CFIs is to send the Assistant Chief Instructor an email from that Gmail. The Assistant Chief will then grant the CFI access to a shared spreadsheet, where they will be able to see the electronic stage check board.

NLT COB on Thursdays, each check instructor will post an available time slot for the upcoming week on the electronic stage check board; CFIs will schedule students for available slots. If their availability permits, check instructors may, on Friday, add an additional time slot to the schedule. (Only one check instructor is allowed in any given time block.)

Instructions for both roles (CFI and check instructor) are included on the spreadsheet itself.

There will always be two stage check boards in the electronic spread sheet—one for the current week and one for the future week.

This procedure does not apply to final stage checks. The Assistant Chief maintains a manual sign-up sheet for final stage checks.

Stage Check Orals (Flight Not Accomplished)
Occasionally, a substantial period of time will elapse between completion of the oral portion of a stage check and the flight portion. Circumstances vary as to why this situation occurs, but it is undesirable. In such cases, how long the completed oral eval remains "valid" as a prerequisite for the associated stage check's flight portion will be determined by the Chief Instructor.

Flight Course Graduation Certificate Expiration (Final Stage Checks)
14 CFR 61.71(a) reads:
> A person who graduates from an approved training program under part 141 or part 142 of this chapter is considered to have met the applicable aeronautical experience, aeronautical

knowledge, and areas of operation requirements of this part if that person presents the graduation certificate and passes the required practical test within the 60-day period after the date of graduation.

Our graduation certificates are dated the day the course final stage check is successfully completed, and are valid for 60 days from that date. If a Private, Instrument, or Commercial course graduate delays greater than 60 days (from the date on the graduation certificate) in taking the practical test associated with the certificate or rating, then, in order to receive a new course graduation certificate and regardless of whether the reason for the delay is voluntary or involuntary, the final stage check will be required to be repeated in its entirety, both the oral and flight portions, with a Tech check instructor, with applicable standards being met.

Final Stage Check Guidance
Louisiana Tech University instructors will not sign up students for final stage checks until they have given the student the "Ground" and other Qualification(s) in Talon/ETA. The Ground Qualification implies a) completion of the applicable ground school, and b) completion of the required FAA knowledge test. Louisiana Tech instructors will not sign up students for final stage checks until a photocopy of the applicable certificate/rating's associated FAA knowledge test report (with passing score) is in the student's training folder.

Check instructors conducting final stage checks will personally observe the presence in the student's training folder of a photocopy of the FAA knowledge test associated with the course.

Tech instructors and students will not schedule FAA practical tests with DPEs until the student has satisfactorily completed the final stage check for the associated certificate/rating.

FLIGHT TRAINING PROGRESS

Flight Training Progress Expectations
Students are expected to progress normally, completing FAA practical tests as appropriate for the particular certification and/or rating sought. Flight hour requirements vary with the certification and/or rating. Different students learn at different rates. Learning plateaus are not uncommon. Lessons are repeated in accordance with the Training Course Outline. The normal expectation is to follow the TCO lessons and units in the order presented, unless there is a valid reason not to do so (resource availability, weather, etc.) CFIs who have a requirement to do syllabus lessons out of numerical sequence will annotate why in the Talon/ETA gradesheet comments section.

Failure to Progress
If the student is not progressing in a normal manner as demonstrated by the student consistently not performing to accepted levels of proficiency, the flight instructor will recommend a progress or elimination check, as applicable, be conducted by the Chief Instructor or his representative.

The Chief Instructor will formally meet with and counsel any student who fails the same stage check twice. At this meeting, the student will be notified in writing that, unless there are real mitigating circumstances, another failure of that same stage check will result in immediate suspension from flight training and a recommendation for the Department Head to dismiss.
In the event of a third failure, the matter will be automatically referred to the Department Head, who will be provided the student's training record. If the student is requesting to appeal (and return to training), he/she will meet with the Department Head within five working days of being

suspended from flight training. (Contact the Department Head's Administrative Coordinator for an appointment.) If the student does not desire an appeal, he/she will so inform the Chief Instructor, will be considered to have voluntarily withdrawn from training, and will be directed to the Department Head's Administrative Coordinator to declare a change of major.

These procedures will also apply to any student who fails to progress (as described herein) or whose progress or elimination check results in the recommendation to withdraw. They will likewise apply to any student who demonstrates a pattern of failed stage checks in the various stages, or who, regardless of flight performance, demonstrates a pattern of violations of flight discipline.

Informal Counseling
Students in the Private and Instrument courses will be alerted when they have achieved the minimum total TCO-required training times. There is no "penalty" or "threat" attached to this information; it is only for situational awareness.

Progress Checks
The procedures below will apply to Private and Instrument students achieving 175% of the TCO-required training hours (aircraft plus device). The "critical" figures will be 70 training hours for Private and 61 for Instrument. (1.75 times 40 for Private, and 1.75 times 35 for Instrument.) If, on the unit on which the student passes 70 or 61 training hours, as applicable, the student's performance is judged insufficient to attempt the final stage check for the course, or if the student has "timed out" but not reached the end of the course, then that unit will be graded Complete and 'U'. The Chief Instructor will be notified, and the student will be referred to the Student Success Coordinator (SSC). The SSC will interview the student in search of mitigating circumstances or training anomalies. If none are found, the student will be administered a progress check on his/her next flight (or sim or oral, as applicable). The progress check instructor will be designated by the Chief Instructor. The next succeeding unit in the lesson will be used, if any remain. If not, the last unsatisfactory unit will be repeated. The progress check pilot will have the standard four choices for an overall grade: Unsatisfactory, Fair, Good, or Excellent. The check instructor will annotate "Progress Check" in the upper Comments block of the Talon/ETA gradesheet. (Such annotation in the student's logbook is not desired or required.)

The progress check process may also be initiated when it becomes certain that the student <u>will</u> exceed (as distinct from "has exceeded") the figures above (70 and 61), or at Chief Instructor discretion. Additionally, failure to progress in ground knowledge may warrant a progress check.

Progress Check (PC) Grading Procedures and Consequences
(1) <u>Unsatisfactory.</u> The student will be referred to the Chief Instructor for an elimination check (discussed below). (2) <u>Fair.</u> The check instructor believes that minor remediation will result in success. The student will be authorized two further complete flights (or sims, if applicable) totaling up to 3.0 Hobbs hours. After those two flights, the assigned instructor will judge whether the student is or is not ready for the final stage check or, if applicable, has met the standards of the lesson. If the performance does not meet standards, the unit(s) will be graded 'U' and the student will be referred to the Chief Instructor for an elimination check. (3) <u>Good or Excellent.</u> The student will progress to the next TCO unit for which he/she is opted. If the next opted unit is the final stage check, then he/she will be signed up for that immediately.

Progress check procedures also apply to students who fail a stage check for either ground or flight. The re-take will count as a progress check, but the option to grade "Fair" overall is removed, since stage checks are graded 'A', 'B', or 'F'.

Elimination Check (EC) Procedures
In the counseling prior to the check, the student will be informed that it is optional; withdrawal is a choice. The Chief Instructor, the Assistant Chief, or a designated senior check instructor will conduct the check, using the same grading procedures mentioned above. If the result is satisfactory, the student will progress to the next TCO unit for which he/she is opted. If the next opted unit is the final stage check, then he/she will be signed up for that immediately. If not satisfactory, the student will be referred to the Department Head to discuss options.

Elimination check procedures will apply to students who have previously required a progress check in any stage of their present course, but then subsequently fail to progress. Elimination check procedures also apply to students who fail the same stage check twice for either ground or flight. The third attempt will count as the elimination check. Students previously passing an elimination check and then subsequently failing to progress will receive another elimination check (not another progress check).

Remediation
Students failing a stage check or progress check are authorized two remedial units (maximum) in preparation for the ensuing progress check or elimination check, as applicable. Greater than two remedial units will only be approved if there are unavoidable delays (which are not caused by the student).

Commercial Course, Complex Airplane
Students who fail to transition successfully to the Arrow, as demonstrated by exceeding 20 complex airplane hours (of dual received, at Tech) and still being unable to meet standards will be graded 'U' and will be begin the PC/EC process as detailed above.

Student Solo Expectation
Student Pilots are expected to solo between ten and twenty flight hours. If the student cannot safely solo, the flight instructor will request a progress check from the Chief Instructor.
The Chief Instructor or his representative will assess the student's progress and recommend one of three actions: additional flight training hours, a probationary period, removal from the flight training program. If the student cannot safely solo after the additional flight training hours, the student will be withdrawn from the flight training program unless extenuating circumstances exist. The student will be referred to the Department Head for a change of major.

COMMERCIAL PILOT TCO ADHERENCE

The intent of Stage 1 of our FAA-approved Commercial Training Course Outline (TCO) is to comply with 14 CFR 141, Appendix D, Paragraphs 4 and 5. Stage 1 of the Commercial TCO will be executed as it is written, preferably in the order presented, with some interspersing of flight and simulator time. Talon/ETA is intended to order the TCO and to make it simple to tell if a student meets minimums (and thus complies with 14 CFR 141). It is not intended to be an obstacle that CFIs think they can and should work around.

Check instructors will not accomplish the Commercial Navigation Check unless Talon/ETA reflects that the Stage 1 minimums are met.

Absent Chief Instructor approval, Commercial students are <u>not</u> authorized to fly Stage 3, Lesson 1, Unit 1 sorties until they have completed <u>all</u> Stage 1 units up to and including Stage 1, Lesson 4, Unit 2, the 250 NM solo cross-country. The purposes of this restriction are to 1) ensure students are tracking to meet minimums, and 2) minimize wasted flight time, during which students are not meeting any specific TCO requirement.

Additionally, Commercial students will <u>not</u> be credited in Talon/ETA with Night Solo Time and Solo Night Takeoffs and Landings <u>except</u> when they accomplish these items during Stage 1 units. Exceptions require Chief Instructor approval. These restrictions are necessary because <u>all</u> the items in Stage 1 are <u>required</u> by 14 CFR 141, which governs our approved TCOs.

Meeting 14 CFR 141 Minimum Times Within the Commercial TCO
The Course Minimums in Talon/ETA requires substantial interpretation on the part of the CFI. The following Minimums are directive in nature:

Course Total (Hours) – 120 (airplane plus simulator)
IFR Flight Time (Hours) – 10
Complex Airplane (Hours) – 10
Solo NVFR TO/LDG (Quantity) – 10 and Solo tower (Quantity) – 10 (These 10 landings are intended to be at night at an airport with an operating control tower, per 14 CFR 141.)
Solo NVFR Time (Hours) – 5
Solo XC>250NM (Quantity) – 1
XC DVFR>100NM (Quantity) – 1
XC NVFR>100NM (Quantity) – 1

The remainder of the Course Minimums in Talon/ETA reflect items planned times, and are likely to be omitted in future Talon TCO renderings in ETA.

Note: The Talon/ETA "Course Minimum" of 24.0 AATD-Simulator (Hours) is <u>not a minimum at all</u>. It is, in fact, the MAXIMUM amount of the required 120 Course Total hours which can be legally credited towards course completion in accordance with Part 141. <u>Simulator time in excess of 24 hours is not creditable towards Commercial course completion.</u>

Note: Not precisely specified as a Minimum in Talon/ETA is the Part 141 requirement for the student to receive 55 hours (of the required 120) as instruction. Thus, the Dual (Hours) and the AATD-Simulator (Hours) figures must, when added together, equal not less than 55 hours of instruction.

Note: Talon/ETA's former reference to "FTD-Simulator" in the Minimums has been altered to read "AATD-Simulator."

ACADEMICS

Ground schools for certificates and ratings are taught as part of the Professional Aviation degree program. Students who earn a 'C' or better in their ground school classes receive a ground school graduation certificate. This certificate will be presented to the proctor of the knowledge

test, in lieu of a logbook endorsement. Students are expected to pass the appropriate FAA Knowledge Test at the completion of the academic class (ground school). If the student does not pass the appropriate FAA Knowledge Test, the student will be placed on Flight Probation (see below).

FAA Written Practice Examination

To be eligible for flight instructor endorsement to take FAA knowledge tests without a ground school graduation certificate, students are required to achieve 90 percent or higher on a practice FAA written examination. Students who do not meet this requirement will not receive the required endorsement to take the FAA knowledge test.

Finishing Flight Training Prior to Ground

Occasionally, due to University and Department academic class scheduling, students may complete the flight training portion of a given course prior to completing the ground school course(s) at the University. Such students may wish to continue on to their end-of-course practical tests. To do so, they must meet the following conditions:

1. The student must have taken one-half of the ground school associated with the particular course (Private or Instrument), and earned at least a 'C.' This assures that that 14 CFR 141 minimum aeronautical knowledge training time is met.
2. The student must be presently enrolled in the other half of the ground school for the particular course.
3. The student must have done all of their flight training for the particular certificate/rating in Louisiana Tech University aircraft.
4. The student obtains Chief Instructor approval.
5. The student's assigned CFI must conduct oral lessons with direct reference to the ground school textbook, adding special emphasis to the aeronautical knowledge items listed in Paragraph 3 of 14 CFR 141, Appendix B, C, or D, as applicable. This assures that the required knowledge items have been covered.
6. The student must meet the practice test performance requirement listed above.
7. Student's assigned CFI endorses him/her to take the applicable FAA knowledge test.

Students who comply with the above will be considered to have completed the ground training requirements of the Training Course Outline, and may receive course graduation certificates and take knowledge (and then practical) tests. Students who do not comply with the above either 1) are considered Part 61 students, and must meet applicable aeronautical experience requirements, or 2) must wait until finishing both halves of the applicable ground school to graduate a particular flight course.

FLIGHT PROBATION

Flight probation is administered when a student fails to accomplish the appropriate FAA knowledge test at the completion of the appropriate academic course. (Probation may also be assigned by the Chief Instructor for other deserving performance.) "Probation" means the student will not be allowed to receive aircraft flight training until released by the Chief Instructor. During the probation period the student will be expected to attend academic classes, practice and study for the appropriate FAA knowledge test, and pass that test before flight training will be allowed to resume flying.

If the student fails to successfully pass the appropriate FAA Knowledge Test after the application of flight probation, the Chief Instructor will give the student the following options:

1. Purchase a "Home Study Course" and successfully complete the associated academic material and FAA Knowledge Test.
2. Withdraw from the flight degree program.

If a student is failing non-Aviation academics, or achieves a grade point average (GPA) less than 2.5 on a 4-point scale, the student will be put on Flight Probation and referred to the Department Head.

STUDENT ABSENCE OR LATENESS—"NO SHOW" POLICY

(See also ADMINISTRATIVE GUIDANCE in this section.)

In terms of the flight schedule, there is little distinction between absence and lateness. Unutilized flight time is forever gone, once the time passes. Students who are absent or late for scheduled flight training without prior cancellation cause hardship for all. These students are issued a "NO SHOW," and will be <u>charged for one hour of dual flight</u>, and counseled accordingly. If the NO SHOW was for a ground or training device lesson, the student is charged for two hours ground instruction. Counseling statements will be retained in the student's training folder. Absence from academic classes will be in accordance with Department and/or University policy.

Consequences of Unexcused Absence or Tardiness That Precludes Training (NO SHOW):
First offense: Warning from Chief Instructor and counseling statement in training folder.

Second offense: Student will be charged as described above, and will report to the Chief Instructor for formal counseling.

Third offense: Student will be charged as described above. Student will be withdrawn from the flight program until and unless he/she can provide proof of justifying circumstances to the Chief Instructor. The Chief Instructor may refer the case to the Department Head.

An appropriate grade, in accordance with Tech academic policies, will be recorded if the student is permanently withdrawn from the flight training program.

PART 141 vs. PART 61 TRAINING

All new Private, Instrument, and Commercial students begin their courses under Part 141. Exceptions require Chief Instructor approval.

All students flight training at Louisiana Tech University, regardless of whether they are training under 14 CFR 141 or Part 61, are required to comply with and follow the Part 141 training course outline (TCO) for the certificate or rating sought, completing all units, worksheets, and stage checks, except as omitted or waived by the Chief Instructor.

The purpose of the above is to assure that all trainees endorsed for practical tests by Tech and its instructor force do indeed meet our standards.

Transfer students will receive an evaluation flight and oral or written tests to determine their appropriate start point in the applicable TCO. See also "Transfer Students Who Already Hold an FAA Private Pilot Certificate," this subsection, below.

All instructors are expected to follow the course curriculum(s) as closely as possible. If a particular lesson or unit cannot be completed due to conditions beyond our control (i.e., weather, availability of aircraft), the instructor will be prepared to cover the next applicable lesson or unit.

Part 61 and Part 141 Training (Additional Guidance)
The awarding of a Louisiana Tech University Professional Aviation degree implies completion of flight training at Louisiana Tech University. Notwithstanding legitimate transfer students, the value of the Tech degree would be diluted by awarding it to students who did their flight training under other systems and at other locations.

Flight training at Louisiana Tech University is meant to be uniform and syllabus-driven. While there is no prohibition against us doing Part 61 training (except that the student must be a Tech student, i.e. registered), we need a standardized system of placing students who arrive at Tech with previous flight training experience. Note that Part 61 training experience has zero legal value towards completing a Part 141 course.

New students having any previous aeronautical experience (outside Tech) will present their logbook to the Chief Instructor during their first day at Flight Operations.

All students will accomplish Stage 1, Lesson 1, Unit 1 of the course in which they begin. All students will accomplish all stage checks for their course of training before being endorsed for any practical test by a Tech CFI.

Pilots should note that, in most cases, to be eligible for the FAA Restricted ATP certificate, a pilot's Instrument rating and Commercial pilot training must have been accomplished under Part 141.

1. **Private.**
   a. Students transferring from another Part 141 Private Pilot training program will be credited in accordance with 14 CFR 141.77.
   b. Private Pilot candidates (Student Pilots) often enter Louisiana Tech University with "some" aeronautical experience, i.e. dual received under Part 61. Unless such a student has already soloed (and that solo happened recently), he/she can expect to complete our entire Part 141 flight syllabus.
   c. If the student has already soloed, the student may Private Pilot complete training under Part 61. Such a student will first accomplish an oral and flight evaluation with a Tech check instructor. Following the eval, the check instructor will coordinate with the Chief Instructor, who will place the student at an appropriate point in the syllabus. Directed syllabus events after that point will be accomplished. This method will require CFI attention to detail, to ensure Part 61 aeronautical experience requirements are met and documented in the student's logbook. This method may or may not result in cost savings.
   d. Students who already hold a Private certificate will be credited with PRAV 110 and PRAV 111 only <u>after</u> the student obtains an Instrument rating through Tech.

2. **Instrument.** 14 CFR 61.65 requires 50 hours of cross-country PIC time, along with other specifics. Students proposing to complete their Instrument rating under Part 61 must show that this requirement is already met in their logbooks. They must then be evaluated for syllabus placement. They must then pass each stage check. Circumstances calling for this course of action are rare, but possible. See the Chief Instructor.
   a. Students transferring from another Part 141 Instrument training program will be credited in accordance with 14 CFR 141.77.
3. **Commercial.** 14 CFR 61.129 requires 250 hours total aeronautical experience. Louisiana Tech University's Part 141 Commercial Pilot flight syllabus requires 120 hours of aeronautical experience <u>in the course</u>. These 120 hours must be accomplished on Tech syllabus activities, in Tech aircraft or devices, and with (or under the supervision of) Tech CFIs. A maximum of 24 of the 120 hours may (and should) be accomplished in Louisiana Tech University's aviation training devices.
   a. Students transferring from another Part 141 Commercial Pilot training program will be credited in accordance with 14 CFR 141.77.
   b. In the past, it was common for students to enter Commercial Pilot training, but then self-declare that they were "going Part 61" upon amassing 250 flight hours—most of which was gotten outside of Tech. They would then proceed to their Commercial practical test. This is no longer permitted.
   c. **Definition.** As used below, "program entry" means when the student enrolls in any Tech flight course or ground school (PRAV 101, 102, 110, 111, 240, 241, 242, 243, 340, 342, 343, and 344).
   d. Whether or not a Louisiana Tech University Professional Aviation major student may pursue a Commercial Pilot certificate under 14 CFR 61 is determined <u>upon that student's initial entry into any course in the Professional Aviation program</u>. This determination will be made based on the student's total aeronautical experience <u>at the time of program entry</u>. There will be no redetermination.
   e. The "Magic Number" is 130. Students possessing less than 130 hours of logged aeronautical experience *at the time of their entry to our program* will complete the entire LTU Commercial TCO (if they wish to major in Professional Aviation). Students entering Tech with greater than 130 flight hours may pursue the Commercial certificate at Tech under Part 61. These students will be evaluated for program placement, and will complete all stage checks. Their CFIs will consult directly with the Chief Instructor, to verify all Part 61 requirements are met. Being a "Part 61 student" does not equate to unstructured training. It just means some select syllabus sections may be omitted.
   f. Once Professional Aviation major students begin flight training at Louisiana Tech University, they will obtain their Commercial pilot training in accordance with our 14 CFR 141 approved Commercial Pilot TCO, and are required to complete the course, regardless of any extracurricular aeronautical experience they may gain <u>after</u> program entry.
   g. There will be no further "going Part 61" by Professional Aviation major students once they commence flight training at Tech, regardless of their attainment of total flight time after program enrollment.

The objective of these policies is to produce a uniform pilot product. Experience (in the form of failed practical tests) has proven that having logged aeronautical experience, in whatever quantity, is no substitute for following a structured, supervised flight training program. The

further objective is to award Tech Professional Aviation degrees to students who actually did do their flight training at Tech.

Fixed-wing Transition TCO

Louisiana Tech University has an approved TCO entitled COMMERCIAL PILOT ADDITIONAL AIRPLANE CATEGORY AND SINGLE-ENGINE LAND CLASS (FIXED WING TRANSITION) TRAINING COURSE OUTLINE. This FAA-approved TCO complies with 14 CFR 141, Appendix I. Its use is specifically limited to pilots who presently hold an FAA Commercial Pilot (Rotorcraft) Certificate with Instrument Rating.

The student's completion of, or concurrent enrollment in Commercial Pilot ground school (PRAV 340) is requisite.

Flight instructors require a briefing from the Chief Instructor prior to training students with this TCO. Only Instrument-rated instructors may conduct Flight Stage 2 of this course.

Transfer Students Who Already Hold an FAA Private Pilot Certificate

We have a requirement to evaluate those pilots who transfer into our program holding private pilot certificates gained through non-Tech training sources. To accommodate this in Talon/ETA, we have inserted into the Instrument Rating TCO Stage 0, Lesson 1, Units 1 and 2. (This Lesson and its Units are NOT part of our FAA-approved Instrument Rating TCO, and do not alter that TCO; they are merely in Talon for our convenience, to avoid the use of Rentals and Refreshers.)

The intent of "Stage 0" is for a Tech check instructor to verify that the non-Tech-trained private pilot is indeed ready to begin instrument training in the G1000 Skyhawk. While we would not necessarily expect such a pilot to immediately display mastery of an unfamiliar aircraft with unfamiliar avionics, we do expect the pilot to come near to ACS in basic maneuvering, with no "real" instructor assistance needed aside from using the G1000. The profile flown should mimic that used for a private pilot final stage check. In the ground evaluation, the pilot should display a private pilot level of knowledge as to basic aerodynamics, FARs, the AIM, etc. While both the ground portion and the flight are "fail-able," such failure does not necessarily initiate the Progress/Elimination Check process described above.

Prior to requesting the Stage 0 check, each CFI assigned a new transfer Instrument TCO student will conduct ground training sessions as needed to cover the following with the transfer student who is not familiar with our way of doing business:
- Training folder creation (if applicable—folder is generally already created) and update the folder to the point of having the entire "Verify Before First Flight" section of the "STUDENT RECORD CHECKLIST" page signed off;
- Flight account funding verification;
- SOP test completion review (the SOP test is issued at the student's initial meeting with the Chief Instructor);
- G1000 Private Pilot Worksheet and C-172 Information Manual Review worksheet issued, completed, and reviewed;
- W&B/flight release form completion demonstrated. (These students are required to complete a manual weight and balance for each flight Unit in Stage 1.);
- If the student in question has never flown a G1000 Skyhawk, a full preflight inspection. If the student already has time in type, this item may be skipped or shortened.

- A detailed review of the knowledge tasks in the Private ACS.

CFIIs schedule the ground training listed above on Stage 0, Lesson1, Unit 1 and charge Oral for actual time spent. The Resource associated with Stage 0, Lesson 1, Unit 2 is selectable—either airplane or ATD. Typically, the instructor should accomplish one of each (flight and ATD) prior to the student being signed up for the check. Grade the Units Incomplete; the check instructor will complete them. Upon completing the above, CFIIs assigned new, non-Tech-trained private pilots will request the Stage 0 check via the normal stage check scheduling means, unless they are check instructors themselves. Unlike normal stage checks, check instructors are authorized to conduct the Stage 0 check for their own assigned students.

Check instructors are required to exercise judgment prior to issuing a satisfactory grade on Stage 0. If significant remediation appears warranted, notify the Chief Instructor to arrange it. The check instructor and the Chief Instructor will jointly decide whether full remediation and "re-check" are warranted, or if perhaps a review ride (or ground training) with the assigned flight instructor suffices. In either case, the applicable Stage 0 Unit(s) will be used (and, if necessary, repeated). The transfer student does not begin the Tech Instrument Rating course until basic private pilot proficiency is demonstrated.

The foregoing applies only to FAA private pilot certificate holders who did not train for that certificate at Louisiana Tech; these are our most common transfer students. Student pilot certificate holders who have "some" flight training logged are addressed above.

CFIIs assigned "normal" Instrument Rating course students, i.e. those who graduated Tech's Private Pilot course, will omit the Stage 0 Units on their students' Talon Training Plan page.

PROFESSIONAL AVIATION MAJOR REQUIREMENTS

Requirements for a major in Professional Aviation are clearly stated in the Louisiana Tech University Catalog. Waiver of any provision thereof is at Department Head discretion.

Students that have attended other learning institutions and obtained FAA Certificates/Ratings may be allowed to transfer them into Tech's Professional Aviation degree program. The Department Head approves college credit for transfer students. The Chief Instructor will, in accordance with 14 CFR 141, assess and approve/disapprove student requests for transfer credits for FAA Certificates/Rating courses. This may include written testing and/or an evaluation flight to determine the point at which the student should start in the syllabus. After enrollment, taking courses at other learning institutions will be permitted only when the student obtains Chief Instructor and Department Head approval.

It is in the best interest of Tech aviation students to attend all aviation training and education at Louisiana Tech University. As noted above, flight time credit for students joining the program with training in progress for a certificate or rating is in accordance with 14 CFR 141.77.

In addition to the above policy and the University Catalog procedures on transfer of credit, transfer students who already have a Private Pilot certificate must get all subsequent required certificates/ratings (Commercial/Instrument/CFI) through Louisiana Tech. Absent Department

Head approval, failure to adhere to this policy will result in the student not graduating in Professional Aviation.

FLIGHT INSTRUCTOR CANDIDATE TRAINING

Graduation with a B.S. in Professional Aviation from Louisiana Tech University requires students to obtain the Flight Instructor, Airplane Single Engine certificate (CFI-A).

Flight instructor candidates will train under Part 61, and will log a minimum of nine dual sorties in the right seat, training on Private and Commercial maneuvers. During these sorties, the focus will be on the trainee's ability to offer valid instruction while operating the flight controls, and maneuvering to Commercial standards. Basic instrument flight training techniques will be practiced throughout.

Instructor candidates should anticipate at least 20 hours ground training, on each Task in the Flight Instructor Practical Test Standards (PTS), culminating with a simulated practical test ground evaluation with the Chief Instructor. Training is documented in the trainee's logbook.

The CFI flight training program will be as follows:
1. Private Pilot flight (trainee not required to instruct). (C-172R/S)
2. Private Pilot maneuvers (instructing while meeting ACS/PTS). (C-172R/S)
3. Commercial Pilot flight (trainee not required to instruct). (C-172R/S)
4. Commercial Pilot maneuvers (instructing while meeting ACS/PTS). (C-172R/S)
5. Stall/spin endorsement sortie (in accordance with 14 CFR 61.183). (C-172R/S)
6. Private Pilot flight (trainee not required to instruct). (Retractable gear airplane)
7. Private Pilot maneuvers (instructing while meeting ACS/PTS). (Retractable gear airplane)
8. Commercial Pilot flight (trainee not required to instruct). (Retractable gear airplane)
9. Commercial Pilot maneuvers (instructing while meeting ACS/PTS). (Retractable gear airplane)

Flight instructor applicants require logbook endorsements prior to their practical tests as follows:
1. 61.183(d) Fundamentals of instruction ground training as listed in 61.185.
2. 61.183(g) Areas of operation as listed in 61.187.
3. 61.183(i) Spin endorsement.
4. 61.39(a) Demonstrate satisfactory knowledge of areas deficient on the two required knowledge tests.
5. 61.39(a) The applicant has received instruction in the preceding two calendar months and is prepared for the required practical test.

American Flyers
American Flyers is the only outside training provider presently approved for training Louisiana Tech University CFI candidates. It is preferred that Tech students obtain their CFI training at Louisiana Tech University when possible. The use of American Flyers for CFI training is not intended to be the norm.

Commercial Pilot certificate holders may elect to accomplish their CFI training at American Flyers if the following conditions are met:
1. The Chief Instructor agrees and the Department Head approves.

2. The student is "academics complete" (no curriculum courses remaining to take) or, at least, is not presently enrolled for any Tech classes (including on-line classes) other than PRAV 411 (Instructor Pilot Flight).
   a. Students will not be excused from University classes for the purpose of attending flying/ground training away from the University.

PRAV 411, Instructor Pilot Flight

Completion of PRAV 411 (and thus, awarding of the Professional Aviation degree) requires training and checking in a complex airplane, demonstrating instructor-level competence. Personnel who utilize American Flyers for CFI upgrade must return to Tech and fly a minimum of three sorties of dual instruction (at normal dual "Refresher" rates) in our PA-28R aircraft, followed by a proficiency check flight with the Chief Instructor or his appointed representative during which the pilot must demonstrate instructor-level proficiency in the PA-28R. Time logged in other (non-Tech) complex airplanes does not fulfill this requirement.

STUDENT GRIEVANCE/APPEAL PROCESS

Students will follow the following process for any dispute regarding TCO unit grading.

1. The student must appeal directly to the flight instructor within five school days after the event. Every effort will be made by both parties to resolve the matter expeditiously.

2. If the question is not resolved, the student may file a written appeal to the Chief Instructor within five school days after the attempt to resolve the matter with the instructor has failed. Within five school days of receipt of the written appeal, the Chief Instructor will schedule a conference with the student and the instructor in an effort to resolve the grievance. The student and the instructor will be notified in writing of the date, time, and place of the conference. Within five school days of the conference, the Chief Instructor will prepare a report of the disposition of the matter with copies to the student, the instructor, and the Department Head.

3. If either the student or the instructor wishes to appeal the disposition of the matter, he/she may do so in writing to the Department Head within five school days of the receipt of the Chief Instructor's report. Within five school days of receipt of the written appeal, the Department Head will schedule a conference with the student and the instructor in an effort to resolve the grievance. The student and the instructor will be notified in writing of the date, time, and place of the conference. Within five school days of the conference, the Department Head will prepare a report of the disposition of the matter with copies to the student, the instructor, the Chief Instructor, and the departmental records. The Department Head's decision is final and binding.

FRATERNIZATION

Fraternization is a personal relationship between a student and flight instructor that crosses the boundary of a working relationship. Fraternization means inappropriate relationships in the workplace. One egregious example would be a flight instructor dating his or her student. Fraternization might also be a personal relationship that impacts objectiveness or affects other students' feelings of equal treatment and quality training. For Tech Professional Aviation purposes, the definition of fraternization is expanded to include favoritism. To preclude this,

students will not be instructed by their close friends or relatives, if either of such exists in the program. Additionally, students and their assigned instructors will never borrow or lend money from or to each other, nor will they gamble money with each other. It is essential that a healthy and professional workplace be maintained at all times. If any of the above is the case, an instructor change is in order. Fraternization between flight instructors and their assigned students will not be tolerated. This will preclude favoritism and avoid potential sexual harassment issues.

➢ **Fraternization is:**
- Not necessarily related to the individuals' genders
- Detrimental to good order and discipline
- Detrimental to professional training
- A potential legal violation
- Prohibited

➢ **Fraternization could result in:**
- The questioning of an instructor's objectivity
- Actual or perceived preferential treatment
- Compromised integrity
- Administrative or punitive action

➢ **Healthy Relationship Traits include:**

- Respect	- Non-harassing
- Honesty	- Non-compromising
- Loyalty	- Positive influence
- Trust	- Professional commitment

If fraternization is identified, accused, claimed to exist, or suspected, the Chief Instructor will conduct a thorough investigation of the issue(s). The following due process will be adhered to in the investigation:

1. Each associated party and witness will prepare a written statement identifying activities, actions, and any facts supporting the claim or defense.
2. The Chief Instructor or his representative will interview each party involved.
3. Each interview will be documented, and other information related to the request will be assembled.
4. A summary of the facts will be prepared, and submitted in writing, along with recommendation(s), if any, to the Department Head.
5. Due process may include a hearing where each party may present their issues and/or defense. The Fraternization Board will consist of the following members: Department Head, Chief Instructor, and a selected CFI.
6. Upon hearing and review of the facts and issues, the board will find on the validity of the offense.
7. In cases where fraternization is clearly established to have occurred, the Fraternization Board will forward findings to the appropriate authority for action.
8. The board's decision is final.

DRESS CODE

Flight instructors and dispatchers, when on duty, are expected to convey the essence of professionalism through their personal appearance. This includes neatly groomed hair, being clean-shaven, and wearing shirts neatly tucked into trousers. Flight instructor and dispatcher duty attire will show no sign of being soiled or excessively worn.

Male Louisiana Tech University flight students and flight instructors are prohibited from wearing earrings and any other visible body piercings at Tech Flight Operations. Female Louisiana Tech University flight students and flight instructors may wear conservative earrings, but are also prohibited from displaying any other body piercings at Tech Flight Operations.

Dress Code for Flight Instructors and Dispatchers:

1. Long pants or slacks (not blue jeans).
2. Clean shoes, free of holes.
3. Official Louisiana Tech University collared polo shirt (blue or red for CFIs, black or gray for dispatchers), or shirt and tie.

Students enrolled as Professional Aviation majors must be aware that they are training in, and will ultimately be working in, a professional, safety-oriented atmosphere. With this in mind, all students will dress in a professional manner for flight training activities, and must wear clothes deemed appropriate. Hair must be groomed in a neat style, so as not to interfere with flight performance. Students will wear attire that is serviceable in appearance (no holes, tears, cuts, etc.) and showing no sign of being soiled or excessively worn. Shirts will be tucked into trousers. Any student arriving for training wearing shorts, a dress or skirt, or open-toed shoes will forfeit his/her position on the schedule.

Dress Code for Flight Students:

1. Long pants.
2. Clean shoes, free of holes.
3. Official Louisiana Tech University collared polo shirt (gray in color). Standing exceptions:
   a. Flight Team uniform shirts are always authorized to be worn, as are collared polo shirts from other Department-sanctioned student organizations.
   b. Occasionally, at the beginning of a Quarter, the Department will run out of the approved student polo shirts. In this case, any conservative collared shirt may be worn until the situation is corrected.
   c. ROTC students may always wear any dress or utility uniform (not PT gear).

Louisiana Tech University flight students and instructors are authorized to wear pink polo shirts bearing the Department's logo when conducting flight or flight-related ground training.

The above standards apply to both instructor and student at any time flight or ground training is given or received at Tech Flight Operations, whether or not the Chief Instructor is present. They also apply to device training conducted at Davison Hall.

EQUIPMENT AND DOCUMENT REQUIREMENTS

All pilots are required to have their medical certificate, pilot certificate, and photo ID in their possession at all times during flight training. Each pilot, before operation of any airplane, should ensure that the aircraft has on board the aircraft flight manual (AFM), the airworthiness certificate, the registration certificate, weight and balance information, and the operating limitations. The student must also have an appropriate checklist, headset, and current aeronautical charts. A flashlight is required for all night flights.

TELEPHONE COMMUNICATIONS

Telephones are available in the Louisiana Tech Flight Operations building. Their use by other than employees is limited to flight scheduling, communications with Flight Service, and taking messages for Flight Operations personnel. It is the dispatcher's job to answer incoming calls. However, if it is obvious that the dispatcher is unable to answer the telephone, please assist by answering with "Louisiana Tech University Flight Operations" and your name. Take a message if appropriate. Record whom the call was for, its nature, the time of the call, a contact telephone number, and your name. Leave the message on the Administrative Coordinator's desk.

Collect calls are not accepted at Flight Operations. Students on cross-countries who need assistance from Flight Operations because of unplanned diversion or flight plan deviations due to an emergency or aircraft maintenance problems should contact Flight Operations as soon as practicable. Students lacking a cell phone should obtain a phone credit card for this purpose, and carry it with their flight gear.

INTERNET USAGE

Tech Flight Ops has limited Internet capability, which can easily be maxed out by high bandwidth apps or demands. Streaming video (NetFlix) and online gaming are prohibited at Flight Operations Monday-Friday from 0800L to 1700L. Additionally, iPad use is limited to official use, which is defined as aviation studies and flight planning.

GENERAL FLIGHT RESTRICTIONS

1. Spins will be performed only on dual sorties and in approved aircraft.
2. Bank angle will never exceed 60 degrees, and pitch attitude will never exceed 30 degrees nose up or down, unless taught in approved acrobatic or unusual attitude recovery training courses in approved aircraft.
3. Entry and exit from aircraft will be with all engines shut down unless approved and pre-briefed by the flight instructor.
4. The possession and/or use of narcotics is absolutely prohibited. Any staff member, instructor or student found to be using them is subject to immediate termination.
    a. The Department has a Drug Policy, to which students must agree in writing prior to flight training at Tech. This is to be documented in Talon/ETA as a Qualification.
5. Personnel taking medication having any sedative effect are considered grounded. Personnel intending to fly while taking medication will advise the Chief Instructor. An AME statement approving flight may be required prior to resuming flying.

6. No student/instructor/staff member will consume any alcohol product within 8 hours of a scheduled flight lesson. At no time will personnel intending to conduct or receive flight training have a blood alcohol level above .04% by volume.

FLIGHT TRAINING OPERATIONS

General
The Chief Instructor or his representative will be present or readily available, or will be able to be reached by telephone or electronic means whenever Part 141 flight training is being conducted.

Students do not congregate at the dispatch counter nor in the cubicle area.

No flight student in training may carry passengers on solo training flights.

Ground and Air Aborts
Pilots who start an aircraft, but do not take off (failed mag check, etc.) are not charged. They will secure the aircraft and return the key(s) and clipboard to dispatch. The dispatcher will not Ramp In the sortie, but will instead Reset the Ramp Out and cancel it, and update Hobbs time in Talon/ETA after maintenance is performed. Pilots, dual or solo, who take off and then air-abort are charged, since this a legitimate training experience which goes in the pilot's logbook.

SECURITY, RAMP, AND LANDING FEES FOR CROSS-COUNTRIES

Security fees at FBOs are charged to the aircraft's Multi-Service Aviation credit card.

Ramp fees (aside from the now-common security fees) are charged at many airports. This fee is nearly always waived with the purchase of AvGas. If there is any doubt (unfamiliar airport), aircrews should inquire in advance if this is the case, prior to using a given airport. Louisiana Tech University does not reimburse ramp fees paid by aircrews. The only exception would be a maintenance, weather, or an otherwise directed divert. (Even in this case, we still would likely fill the aircraft with fuel from the local vendor, to preclude a ramp fee.) Ramp fees are also not to be charged to the aircraft's fuel card (Multi-Service Aviation). In the event a ramp fee is charged, it must be put on a personal credit card, or paid for in cash.

All the foregoing applies to landing fees, as well. Except in case of an aircraft emergency, Louisiana Tech University aircraft do not land at airports that charge landing fees.

TECH PRO AV WEBSITE

https://liberalarts.latech.edu/professional-aviation/
The Louisiana Tech University Department of Professional Aviation maintains a website with flight information, policies, procedures, and research links. Training course outlines, this safety manual, departmental news, and e-mail addresses can be found on the site. Please visit the site often to keep up on upcoming events.

FORMS PRESCRIBED AND FORM INSTRUCTIONS

A binder of standard forms and instructions for their use is maintained by the Chief Instructor.

Form #29, Maintenance Report
Instructions for completing Form #29 are found in Section 4 of this manual.

Form #52, VOR Equipment Check Log
A copy of Form #52 is found on each aircraft's clipboard. Aircrews will routinely conduct VOR checks and document them on this form, the instructions for which are found thereon.

ADMINISTRATIVE GUIDANCE

Talon/ETA
When CFIs self-dispatch, all normal Talon/ETA dispatching steps are still required, to include disposing of the flight release form upon landing. Do <u>not</u> expect the following day's dispatcher, the Assistant Chief, the Administrative Coordinator, nor anyone else to do it for you "later."

Solo students cannot Activity Complete themselves. CFIs must accomplish this step for them in a timely fashion.

CFIs who have a requirement to do syllabus lessons out of numerical sequence will annotate why in the Talon/ETA gradesheet comments section. The normal expectation is to follow the TCO lessons in the order presented, unless there is a valid reason not to do so (resource availability, weather, etc.) CFIs do NOT arbitrarily jump around or "cherry-pick" the flight syllabus. CFIs must log appropriate times in Talon, for the student to meet minimums. Examples include night, simulated instrument, cross-country, etc.

Instrument students will not be "dual-enrolled" in Commercial until they are complete with the Instrument TCO's Instrument Approaches stage check.

Tach Sheets
Tach sheets offer excellent back-up to Talon, and are used for auditing. They are completed for each ground, ATD, and flight unit. Dedicated ground lessons may be combined with ATDs/flights on one tach sheet, but annotate the tach sheet as such to avoid confusion.

Training Folders
Enrollment certificates are obtained from the Administrative Coordinator, and then signed by the Chief Instructor. Do not request them directly from the Chief Instructor unless the Administrative Coordinator is absent.

A copy of the student's U.S. citizenship proof document(s) stays in the completed training folder upon graduation. If the student completes a course and progresses, make a new copy of these documents for the new training folder. Do not "rob" the old training folders. CFIs are reminded that a United States passport obviates the need for both the birth certificate and the photo ID.

Stage worksheets are not optional. They may be used as a study aid by the student, but the <u>originals</u> of the stage worksheets are to remain in the student's training folder.

Photocopies of Temporary Airman Certificates (which go in the training folder) will be replaced with photocopies of permanent certificates, when issued.

A photocopy of the applicable FAA Knowledge Test Report must be in the training folder before the course final stage check.

Part 141 graduates require a graduation certificate. Graduation certificates are not issued on no notice. CFIs should plan accordingly.

Part 61 students will be clearly annotated on the cover of the training folder. Note that Part 61 students require Chief Instructor approval and a specific training plan. CFIs do not just "decide" to train students Part 61.

CFIs are reminded that training folders are, effectively, <u>legal documents</u>. Each small step in each student's training (and training record) is critical to <u>that</u> student. <u>ACT ACCORDINGLY</u>.

Oral
Let there be no misunderstandings on the subject of charges for Oral instruction. While technically not a license, the flight instructor certificate does serve as a professional license. Licensed professionals (lawyers, doctors, and even tradesmen like electricians and plumbers) generally do not work for free; students should not expect Tech flight instructors to do so. Our method of payment to our professional flight instructors is, and must be, to charge the student for their services. Ground instruction, or "Oral," is part of these services, and CFIs who fail to charge for oral are doing their fellow professionals a disservice. "Oral" encompasses TCO Units dedicated to tabletop instruction conducted by the CFI, as well as time spent briefing, supervising, and de-briefing students. We do not have, and do not intend to invent, a separate term for the Oral charged for these latter duties.

Tech CFIs will follow the following guidelines for Oral instruction charges:

1. TCO ground training Units (Orals) will be charged the duration listed in the TCO, assuming that duration is how long the Unit lasts. If the actual duration spent is less than the TCO (unlikely, in most cases), then actual time will be charged. If the TCO time is insufficient for the task, more Oral might conceivably be charged, but written comments in Talon/ETA are required, explaining why.
2. If a student's ground knowledge is deficient (for their position in training), it will be remediated on an appropriate TCO ground training Unit. It will <u>not</u> simply be "tacked on" to another day's flight or sim unit. If the Oral is conducted on the same day as a flight or sim, the two may be put on the same tach sheet, but the tach sheet will be so annotated, and the two Units will be scheduled and recorded separately in Talon/ETA. Note: VA-funded student <u>cannot</u> be remediated on a Unit from a Stage with which they are complete. A Unit from their present Stage must be utilized.
3. Each TCO's "STAGE FLIGHT TRAINING SUMMARY" lists the "ORL" times associated with the flight units. Those Oral times are considered reasonable and customary, but generally they are maximums. An examination of the expected Oral times in the various TCOs will show that they decrease as the student moves from pre-solo to post-solo to Instrument to Commercial. If they (the Oral times) are unneeded or unused (for example, the student is quite prepared, the student does well and requires little critique or debrief, the flight is a local or a repeat and little to no supervision is needed, etc, etc.), then actual time will be charged. A customary Oral charge for such an event, with a quick pre- and de-brief, would be 0.2 hours. If the student "self-prepares" and the CFI literally just shows up and steps to the airplane, then 0.0 hours would be

appropriate. However, failing to charge Oral just because the CFI and student are friends would be inappropriate.

4. In no case will a student's flight account be "milked" for Oral charges. An instructor suspected of such activity will be questioned by the Chief Instructor or the Department Head. If guilt is determined, it will be grounds for dismissal. So, students must consider the gravity of the matter before making such a claim or accusation.

In short, Tech flight instructors will be judicious in charging their students for Oral time, and will always be able to justify it. On the other side, students must comprehend that virtually nothing in aviation training is free—if a service is being rendered, the service provider has a reasonable expectation to compensated.

Dual-Solo
Instructors do not charge additional oral while observing their students' initial solo sorties. "Dual-solo" in Talon means the instructor is already being compensated at the dual rate. Dual-solo applies to the initial supervised pattern solo ride, and also applies when a CFI accompanies a student on a practical test away from Ruston.

Solo Certificates
CFIs will obtain a Solo Certificate from the Administrative Coordinator following their student's initial solo flight. This certificate is a keepsake; it does not go in the training folder.

Stage Check Guidance
Check instructors will accomplish a thorough training folder review prior to stage checks, and will enforce all of the above prior to flying a stage check. Check instructors will personally verify that each unit in that stage is completed or legitimately omitted in Talon. This is easily done in Talon/ETA by viewing the individual's Training Plan list. (Training Plan is preferable to Course Details, since the units are listed in their syllabus order, and Incompletes and Cancels are omitted.) Check instructors will personally verify the presence and completion of the stage worksheets, as well as every item in the list on the cover of the training folder.

Stage check gradesheets will be posted on the left side of the training folder. Orals go underneath their associated flights. More recent stage checks go on top of older ones.

Instructors who recommend students for stage checks with incomplete paper or electronic records will report to the Chief Instructor and explain to why it is so.

Stage check ground/oral evaluation duration is listed in the applicable TCO. This amount is all that will be charged. Check pilots will tailor their orals accordingly.

University Course Completions
CFIs and students are strongly encouraged to point out intermediate flight course completions such as PRAV 110 (initial solo), PRAV 242 (NavCom stage check), PRAV 342 (Navigation stage check), and 343 (Commercial Maneuvers stage check) to the Chief Instructor for input to the Registrar for inclusion in the student's University transcript.

Facility Appearance
The Louisiana Tech University Flight Operations Center facility will be maintained in good general order. The requirements of the janitorial personnel are restroom sanitation, trashcan

emptying, light bulb changing, and occasional floor cleaning. They do not pick up loose papers, remove discarded food and drink, clean the coffeepot, nor straighten flight planning materials. In short, we must clean up after ourselves.

People make judgments based on appearances. In the aviation business, slovenliness in housekeeping could be perceived by the public as a lack of safety or professionalism. The Chief Instructor has routine, recurring requirements to meet future Tech students and their parents here at Flight Ops. Likewise, drop-in visits by alumni are frequent. FAA and TSA inspections are common. It most definitely matters what these people think of us. A positive first impression is essential. Our facility must be as neat as if we were preparing for a military inspection, or a visit from the University President.

Dispatchers are responsible for the upkeep of the large flight planning room, the cubicles, the dispatch desk and counter, and the classroom. The chief dispatcher will incorporate such into the shift change checklist.

Additional No Show Guidance
Inquire with the Administrative Coordinator to determine if the event is the student's first offense.

CFI
Step I:
1. Fill out the Student No Show Form, and have the Chief Instructor initial. Give the form to Administrative Coordinator after CFI Talon procedures listed below have been completed.
2. In Talon, go to the Home page.
3. Select the Operations option.
4. Click on the "OC" button for the student to be No Showed.
5. Click on the bubbles to indicate No Show.
6. Click OK when asked "Do you want to cancel the activity?"
7. Click the Save button.
   Follow the above steps. Do not "cancel" the student by selecting the CA button from the general Operations page. If this procedure is done, the student will not be No Showed.
Step II (Not applicable to first offense.):
1. Go to the Home page.
2. Go to My Payroll.
3. Click New.
4. Fill in the student's name, the date, the tach sheet number, No Show reason, and direct the request to the Administrative Coordinator. Hours requested will always be two.

Administrative Coordinator
Step III:
1. From the Home page, select the Management option.
2. Select the Authorization request option. Authorize as needed.
Step IV:
1. To charge the student, go to the Home page and select the Management option.
2. Select Student No Shows.
3. Choose the date range and team. Click the Filter button.

4. Select "E" to edit the student. Fill in the petition status, reason, comments, pin number and save. Charge amount billed to student will be based on what CFI wrote on No Show form.
5. Initial No Show form. Return form to CFI to file in student's folder.

Employee Exit Form (Other Than Student Workers)
Louisiana Tech University personnel, whether salaried or paid a wage, will complete the Human Resources EMPLOYEE EXIT/TERMINATION FORM at the time of their leaving service at Tech. Completion of the form involves a lot of movement about the campus to obtain required signatures. Personnel should allow about two hours (on a weekday, during normal business hours) to get this done. Personnel are authorized to write "N/A" on items 2, 8, 9, and 11. All other blocks require a signature or stamp from the applicable agency.

With reference to keys, personnel should note that when they return their building keys to the Physical Plant, they should be given back their original EMPLOYEE KEY REQUEST FORM. Return that form to Flight Operations.

Failure to accomplish the EMPLOYEE EXIT/TERMINATION FORM and turn it in to Tech Human Resources will likely result in the individual not receiving their final paycheck.

The form is NOT required of student workers.

The form is available at https://www.latech.edu/documents/2018/07/unclassified-employee-exit-form.pdf/ .

Flight Account Balances for Students Prior to Practical Tests
Louisiana Tech University pilots will not be indebted to the University. If they are so indebted, and remain students, then they will not graduate. If they have already graduated, their transcripts will not be released. If they are University employees, they are subject to wage garnishment. The stated minimum flight account balance for a student to fly is $500. At Ops Check In, Talon/ETA offers a warning to the dispatcher at $499, which is not to be overridden without Chief Instructor approval. Such approval is not likely, and should not be expected. This feature in Talon/ETA has been quite effective in reducing the number of personnel with negative flight account balances, which was formerly a huge problem.

A problem that still arises with some frequency is personnel, who have the minimum in their flight account, proceeding to practical tests at destinations other than Ruston Regional. When this occurs, the person's flight account inevitably "goes negative." This is unacceptable.

CFIs will not authorize practical test flights (to out-of-town destinations) unless a) all the student's outstanding activities in Talon are completed, and b) the student has not less than $1,000 in their flight account. Dispatchers will also verify students' account balances before dispatching such flights. If the student's DPE comes to Ruston for the practical, then normal flight account minimums apply. The foregoing does not apply to students who are 100% VA-funded.

Use of Tech Letterhead (Paper or Electronic)
The use of the Louisiana Tech University letterhead, such as that found on FIFs, and also the Tech logo found on the cover pages of this manual and the TCOs, whether in print or electronic

correspondence, is restricted to faculty and administrative personnel transmitting official information.

SECTION 1A: POLICIES REGARDING FLIGHT STUDENTS RECEIVING EDUCATION BENEFITS FROM THE U.S. DEPARTMENT OF VETERANS AFFAIRS (VA) FOR FEES ASSOCIATED WITH REQUIRED FLIGHT LABS

GENERAL

Some Louisiana Tech University pilots get their college education and flight fees funded by U.S. taxpayers through the U.S. Department of Veterans Affairs (VA). These students or, in some cases, their parent(s) earned this benefit through their service to our nation.

Louisiana Tech University (Tech) is an FAA-approved pilot school, conducting its private pilot, instrument rating, and commercial pilot courses under 14 CFR 141 with FAA-approved training course outlines (TCOs). Flight instructor training is conducted under 14 CFR 61, using the FAA's *Flight Instructor Airplane Practical Test Standards* as a guide.

Louisiana Tech conducts flight training in single engine airplanes and aviation training devices (ATDs) that it owns, employing only FAA-certificated flight instructors, supervised by a Chief Instructor qualified as described by 14 CFR 141.35.

Louisiana Tech University Professional Aviation's accredited B.S. degree curriculum requires the student to earn the FAA commercial pilot certificate with instrument rating as well as the flight instructor (airplane) certificate. The training is segmented, and the flight labs associated with this hands-on training have definite endpoints, which are either locally conducted stage checks or FAA practical tests. The labs are numbered as follows:

PRAV 110   Private Pilot Flight I
PRAV 111   Private Pilot Flight II
PRAV 242   Instrument Pilot Flight I
PRAV 243   Instrument Pilot Flight II
PRAV 342   Commercial Pilot Flight I
PRAV 343   Commercial Pilot Flight II
PRAV 344   Commercial Pilot Flight III
PRAV 411   Instructor Pilot Flight

Louisiana Tech requires students seeking the Professional Aviation degree to achieve the instrument rating, commercial pilot certificate, and flight instructor certificate in Tech aircraft, with Tech instructors. Although it is preferred that students begin their flight training at Tech and earn the private certificate here also, students may transfer into the program (and be credited for) already holding the private pilot certificate. (This transfer credit is awarded only after the student shows substantial commitment, by having completed the instrument rating through Louisiana Tech.)

Louisiana Tech does not, as of this writing, possess examining authority as described in 14 CFR 141, Subpart D. Therefore, each student is required to complete FAA practical tests for the

applicable certificate/rating upon completion of PRAV 111, PRAV 243, PRAV 344, and PRAV 411 with an FAA-designated pilot examiner (DPE). The student is responsible for the DPE's fee, which may or may not be VA-reimbursable, but is not paid through the school's VA certifying official nor through the student's flight account.

ADDITIONAL GUIDANCE FOR VA-FUNDED FLIGHT STUDENTS AND THEIR INSTRUCTORS

VA funding of flight fees is administered (and continuously audited) by the Louisiana Tech University Registrar. The VA and the Registrar demand that VA students' Private, Instrument, Commercial, and CFI flight training be accomplished while the students are enrolled in the Tech credit course (PRAV 110, 111, 242, 243, 342, 343, 344, and 411) which is associated with the particular TCO stage (Private Stage 1 or 2, Instrument Stage 1 or 2, Commercial Stage 1, 2, or 3, or CFI).

What the foregoing means to students and flight instructors:
1. Instructors will inquire at initial assignment as to every flight student's VA status. If the student is VA-funded, accomplish only activities in courses and/or stages for which the student has registered (and not yet completed) at the University. If doubt exists, see the Administrative Coordinator, who can check BOSS or CICS.
2. Instructors do not jump around in the TCO(s), and, especially, do not repeat units from any previous stage after that stage is complete.
3. For Commercial students, do not allow them to fly Stage 3, Lesson 1, Unit 1 time-building sorties until they have registered for PRAV 344.
4. In general, do not allow Rental flights by, nor fly Refreshers with, VA students unless specifically authorized by the Chief Instructor. Practical test sorties should be flown on numbered/named TCO units.
5. VA students who are less than 100% VA-funded must settle their flight account in advance by paying their portion into their flight account immediately upon beginning a flight course. See the Administrative Coordinator. Failure to comply with this provision will result in grounding of such students.
6. VA students will not exceed the cross-country flight distances or times specified by the applicable TCO by more than 20 NM or 0.3 hours, respectively.

No Show
VA-funded students guilty of a NO SHOW (as described above) will be grounded until they personally remit the fee. The University does not charge NO SHOW fees to the VA.

Failure to Secure the Aircraft
VA-funded students liable for a battery maintenance fee or battery reimbursement charge (as described in Section 4) will be grounded until they personally remit the fee. The University does not charge these fees to the VA.

VA Liaison Coordinator/Certifying Officer: Mrs. Sheila W. Sanchez
Department: Registrar
Office: Keeny Hall 207
Mailing address:
Registrar's Office
Louisiana Tech University
P.O. Box 3155
Ruston, LA 71272-0001
Phone: (318) 257-2176
Fax: (318) 257-4041
Email: **sheilas@latech.edu**

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SECTION 2: SAFETY PROCEDURES AND PRACTICES

TRAINING WEATHER MINIMUMS (IAW 14 CFR 141.93(a)(3)(i)

Louisiana Tech prescribes weather minimums that must be met or exceeded before an aircraft is dispatched for a solo or dual flight. The weather minimums required by Louisiana Tech for cross-country flights must be forecast to remain, for all reporting stations along the proposed route of flight, for the proposed duration of the flight and for one hour thereafter. Unless approved by the Chief Instructor, flight is not permitted in Louisiana Tech aircraft unless the following minimums exist. ***Max Gust shall be used as the limiting wind speed.**

	LOCAL			CROSS-COUNTRY		
	Ceiling Visibility	**Max. Wind Speed**	***Max. Crosswind**	**Ceiling Visibility**	**Max. Wind Speed**	***Max. Crosswind**
Student Pilots	2000/5	12 Kts	5 Kts	3000/5	12 Kts	5 Kts
Private Pilots	2000/5	15 Kts	10 Kts	3000/5	15 Kts	10 Kts
Instrument Rated Pilots	1000/3 (see Section 6)	15 Kts	10 Kts	1000/3 (see Section 6)	15 Kts	10 Kts
Commercial Pilots and Above	Lowest Available Approach	25 Kts	15 Kts	Lowest Available Approach	25 Kts	15 Kts

OBTAINING WEATHER INFORMATION

A preflight weather briefing before each flight is mandatory. Weather information can be obtained in several ways at Louisiana Tech.

Flight Service Station (FSS)
FSS can be reached at 1-800-WX BRIEF or when airborne on appropriate frequencies. A thorough preflight weather briefing is required before departing on any flight away from the immediate vicinity of Ruston. Weather information should be recorded on the Flight Plan/Release form.

www.1800wxbrief.com
The FAA discontinued the Direct User Access Terminal Service (DUATS II) Program, effective May 16, 2018. Internet services, including access to weather and aeronautical information, flight

plan filing and automated services remain available at no charge to pilots at
www.1800wxbrief.com.

Ruston AWOS
The AWOS station located at the Ruston airport gives current weather observations in the METAR format. These can be obtained by telephone (318-242-0062) or by radio (119.525 MHz). Ruston AWOS should be monitored before departing on local flights and before returning to the Ruston area.

WEATHER STATUS

Dispatchers have the authority to ground all aircraft due to observed weather conditions.

The Chief Instructor/Assistant Chief sets the Weather Status for local flight operation, and will so inform the dispatcher, who will post the status.

Unrestricted. No thunderstorms or SIGMETS located within 20 NM of Ruston Regional Airport. Winds are within the solo limits above. All training operations are permitted.

Restricted. Training continues but some restrictions are needed in accordance with the training weather minimums.

Solos Pattern Only. Ceilings preclude safe pre-Private solo area flights or cross-countries, but the weather is stable, and pattern work may be accomplished.

Dual. Current or forecast conditions require judgment and skill. Includes Marginal VFR and windy days.

Dual/VFR Only (Icing or embedded thunderstorms). Dual flights only, remain clear of visible moisture.

Instrument. An IFR clearance is required to depart or arrive Ruston. Minimums for departure are lowest available instrument approach minimums. An alternate will be declared.

WX Recall. Return to Ruston Regional immediately and full-stop.

Stop Launch. Airborne flights continue with caution. No further training sorties are dispatched.

Directed Divert. Supervisor or dispatcher directs Tech aircraft to divert to a specified airport. Crews require Tech permission to return to Ruston.

SEVERE WEATHER

Tornadoes
In the event that a tornado is spotted or one is suspected to be near, cover should be taken in a hallway or the computer lab/CFI lounge area, which has no windows. If outside, proceed indoors. The first person to note or hear of a tornado will report to the Chief Instructor.

LAW ENFORCEMENT AND FIRE PROTECTION

Although located outside the city limits, Ruston Regional Airport belongs to the City of Ruston. If a need for either police or firefighting arises, personnel should call City authorities (i.e. not the Lincoln Parish Sheriff). If in doubt, call 9-1-1. Note that the dialing of '9' on Flight Ops' land line telephones is not required when calling 9-1-1.

FIRE PRECAUTIONS AND PROCEDURES

Aircraft Fires

Aircraft fires will be dealt with according to the instructions in Section 3, "Emergency Procedures," of the AFM/POH. Students will commit these actions to memory.

Other Fires

If a fire is detected or suspected, alert all persons in the vicinity. GET HELP! If the fire is small and localized, extinguish with the nearest fire-fighting equipment. If the fire is large, spreading rapidly, or inaccessible, such as in walls or ceilings, notify flight school personnel and/or call the Ruston Fire Department or 911, then fight the fire with all available help and fire-fighting equipment. If a fire appears to be out of control or if the situation seems dangerous, evacuate the area immediately. Shout to spread the alarm.

Fire extinguishers are located in Flight Ops:

1. At the northeast exit to the ramp
2. In the hallway leading by the flight planning room
3. At the southeast exit to the ramp, by the janitor's closet
4. At the main entrance to the building

Additionally, extinguishers may be found:

1. On each Ruston Aviation fuel truck
2. In the maintenance hangar inside of the lobby
3. In each Tech airplane between the pilot seats

MEDICAL EMERGENCIES

Should a person require medical attention due to severe injury or sickness, alert the dispatcher or other flight school personnel to arrange for emergency medical care.

RAMP SAFETY

When moving about the aircraft parking ramp and taxi lanes on foot, use extreme caution. Always assume that pilots taxiing and any ground vehicle drivers cannot see you, and act accordingly.

Mobile device use (texting, social media messaging, etc.) which requires the user to be heads-down while transiting on foot between Flight Ops and the airplanes, the maintenance hangar, or the FBO is prohibited.

FUEL RESERVES

FUEL REQUIREMENTS: All Louisiana Tech University training flights will be planned and flown in compliance with minimum fuel requirements as established and presented here:

LOCAL   Half tanks (both) minimum on departure.

VFR CROSS COUNTRY   Tanks must be full on departure. Flights will be planned to reach the destination with at least one hour of fuel remaining.

IFR CROSS COUNTRY   Tanks must be full on departure. Flights should be planned to reach the destination, fly an approach, executed a missed approach, then fly to the alternate, fly an approach, and land with an hour of reserve fuel.

SAFETY MEETINGS

The Chief Instructor will conduct meetings for the purpose of flight safety training. CFIs and dispatchers are obliged to attend. The Department Head, the Department Safety Officer, and the Ruston Aviation Chief of Maintenance will be invited to attend the meetings.

All personnel will attend quarterly Professional Aviation safety meetings, conducted by the Department Head. Per the Department Head, personnel missing these meetings are grounded until they accomplish 15 online safety training modules, provided by the FAA and AOPA (five each, plus five more from either source). The certificates indicating course completion will be turned in to the Administrative Coordinator at Davison Hall.

Departmental safety meetings are often held in conjunction with the FAA. If this is the case, Tech personnel are required to establish an account and register at http://www.faasafety.gov/ . CFIs will assist students with account set-up and registration.

HAZARD REPORTING

Personnel observing a safety hazard related to operations will report it to the Chief Instructor immediately. General flight safety hazards may be reported on the Aviation Hazard Reporting Form, located at https://liberalarts.latech.edu/professional-aviation/hazard-reporting-form/ . Utilize the optional Your Name block if feedback is desired.

Mandatory Reporting Events:
Tech pilots will report any of the following events using the appropriate form. If no particular form is designated, use the Flight Deviation Report Form found in Chapter 5.

1. Anything that adversely affect the flight control or handling characteristics of the aircraft.
2. An un-commanded loss of engine power.
3. Smoke or fire in an aircraft.
4. When an emergency is declared.
5. Any aircraft or property damage.

6. An off-runway excursion in which any part of the aircraft leaves the paved surface during taxi, takeoff, or landing.
7. The flight crew becomes lost.
8. An unsafe landing gear indication occurs or the gear fails to extend or retract normally.
9. Exceeding the operating limitations of the aircraft.
10. Loss of braking.
11. Landing with less than legal reserve fuel remaining.
12. Communications or navigation system failure.
13. Near miss, ATC incident, or wake turbulence encounter.
14. Drug use by a crewmember.
15. Bird or other wildlife strike.
16. Foreign object damage (FOD).
17. Any event which may provide useful information to enhance the safety program.

USE OF ELECTRONIC DEVICES ON TECH AIRCRAFT

Excluding bona fide aircraft emergencies, cellular phone use, to include text messaging, social media, and photography, is prohibited in moving Louisiana Tech University aircraft, with the following exception: if a rated pilot (Private or greater) is aboard, cellular phones may and should be utilized as needed to document aircraft malfunctions or symptoms thereof. Otherwise, photography, either still or video recording (of the cockpit or the world outside the aircraft), is permitted in Louisiana Tech University aircraft only with Chief Instructor permission.

Continuous or intermittent in-flight video or audio recording of the pilots' interactions and/or view from within the cockpit (smart phone, GoPro, etc.) is prohibited, unless written permission from the Chief Instructor is obtained in advance. Pilots are expressly prohibited from affixing items, to include cameras, to the exterior airframe of any Tech aircraft. iPod/music media use by the pilot in command is prohibited. Note that all available "free" warnings on these matters have been used up by past students; any future willful transgressions will result in the pilot(s) being referred to the Department Head with a recommendation to dismiss.

"SOLO" AND "STUDENT PILOT" CALLSIGN USE

When operating in the Ruston local pattern, solo Student Pilots will append "Solo" to their call sign. Example: "Ruston Traffic, Skyhawk 24576-SOLO, left base 36, Ruston." The purpose of this is to draw the attention of other pilots sharing the pattern. Outside of Ruston, i.e. cross-country, Student Pilots use the AIM-recommended "Student Pilot" following their call sign.

SPEED WHEN CLEARING THE RUNWAY AFTER LANDING

Louisiana Tech University pilots will achieve a normal taxi speed prior to attempting to exit the runway after landing. If, during runway exit, the pilot feels his/her body move sideways, feels the airplane tilt at all, or hears any sound from the wheels, then the airplane was going too fast.

CROSSWIND TRAINING IN THE TRAINING DEVICE (AATD)

Due to our conservative wind restrictions, it is possible that our private pilot trainees could reach their solo cross-country phase never having flown in crosswinds.

Student pilots will be introduced to a 15 knot crosswind in the AATD during training.

When conditions permit during dual cross-country training sorties, instructors are encouraged to seek out crosswind training opportunities, by requesting and utilizing a crosswind runway.

CROSSWIND CALCULATIONS

Not knowing the crosswind component during takeoff and landing is a potential hazard to pilots. The crosswind component graphical chart in the AFM/POH could be consulted in flight, if there was a second pilot. However, this is rather difficult if the pilot is solo. Listed below is a way to accurately estimate the crosswind component:

Crosswind component may be rapidly estimated as follows:
1. Current wind is <30° off runway heading. Crosswind is neglible unless the total wind is very strong (>20 knots), in which case one should check the chart.

2. Wind 30° off: half the wind speed is crosswind component.

3. Wind 45° off: two-thirds of wind speed is crosswind component.

4. Wind 60° or more off: all the wind may be considered crosswind. (This is imperfect, but conservative. If there is a concern, check the chart.)

Check pilots will sample trainees' knowledge of computing crosswind components on every aircraft stage check.

SPIN BRIEFING

Prior to flying a flight instructor applicant's spin endorsement ride, the instructor will conduct a detailed review of the spin procedures found in the AMPLIFIED PROCEDURES portion of Section 4 of the *Cessna 172 Information Manual*. Direct reference to the publication is required.

During the Private TCO's Stage 1, Lesson 6, Unit 1 oral, and during the Commercial TCO's Stage 2, Lesson 1, Unit 1 oral, instructors will conduct a detailed review of the spin procedures found in the AMPLIFIED PROCEDURES portion of Section 4 of the *Cessna 172 Information Manual*. Direct reference to the publication is required.

OPERATIONS IN RETRACTABLE LANDING GEAR AIRCRAFT

Louisiana Tech University pilots will use the following procedures when flying Louisiana Tech University airplanes with retractable landing gear.

Prior to or upon pattern entry, the landing gear will lowered on downwind in accordance with the Approach and Landing checklist. The hand of the pilot flying will remain on the gear handle/switch until a down indication is observed, at which time the pilot will state, over

intercom, "gear down." Turning base, the verbal gear down statement will be repeated. The pilot not flying (if present) will verbally acknowledge one of these statements. On final, the gear check will be repeated, followed by the pilot flying transmitting "gear down" on the operating radio frequency. For example, "Ruston traffic, Arrow 123LT, final 36, Ruston, gear down." At towered airports, this call should be made to the tower upon being cleared to land or prior to reaching the threshold. If accomplishing an instrument approach, three gear checks will also be accomplished—at the FAF, at 1,000 AGL, and at MDA/DA, again with the "gear down" radio call happening prior to reaching the threshold.

To preclude pilots becoming accustomed to the gear horn, pilots will not delay gear extension when accomplishing power-off accuracy approaches. Additionally, pilots will accomplish steep spirals with the landing gear extended, if accomplishing the maneuver in conjunction with an emergency approach to land. Note that three complete turns in a steep spiral with the landing gear extended requires substantial altitude.

Touch-and-goes in retractable gear airplanes are prohibited, unless a flight instructor is on board.

Absent Chief Instructor permission, Louisiana Tech University retractable landing gear airplane operations require two pilots to be aboard.

Additional guidance on PA-28R Arrow operations is found in Section 6.

LINE UP AND WAIT/LAHSO GUIDANCE

Louisiana Tech University pilots are prohibited, at non-towered airports, from the practice of entering an occupied runway prior to takeoff and waiting for it to become clear.

Except in the event of aircraft emergency, Louisiana Tech University pilots are prohibited, at non-towered airports, from landing on a runway that is occupied.

This policy does not affect normal LAHSO operations at airports with operating control towers. Those operations are conducted at PIC and ATC discretion. Note that Student Pilots are prohibited from participating in LAHSO.

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SECTION 3: AIRCRAFT SERVICING

ETHANOL

Ethanol gasoline is <u>not</u> approved for use in Louisiana Tech University aircraft—100LL only.

SERVICING AT RUSTON REGIONAL AIRPORT

Ruston Aviation is contracted to service Louisiana Tech University airplanes with fuel. If you find that the airplane dispatched to you requires fuel, advise Ruston Aviation of the tail number. Leave the airplane tied down. Precautions that must be taken while the airplane is being fueled include:

1. Chock or tie down the aircraft.
2. Ensure master and magneto switches are off.
3. Ensure that the aircraft is grounded to the fuel truck.
4. Ensure that the fuel truck is chocked.
5. Do not smoke within 50' of the aircraft.
6. After refueling, ensure that fuel caps have been properly secured.
7. Sump the fuel tanks after the aircraft has been serviced.
8. Confirm that the amount of fuel shown on the invoice is correct by noting the meter on the truck.

<u>After any local flight when the fuel is below half tanks, notify Ruston Aviation to refuel. This is to ensure there are no delays in subsequent departures.</u>

Tech pilots will not call Ruston Aviation for fuel prior to determining the aircraft's actual fuel level.

SERVICING AT OTHER AIRPORTS

When refueling away from Ruston, observe the precautions noted above and personally supervise the fueling of your airplane to make sure that the <u>aircraft is being serviced with 100 LL AVGAS</u> and not JET A or automobile gasoline. Personally verify that pump meters are "zeroed" before fueling starts, and personally verify the number of gallons delivered when fueling is completed. Check fuel level after the aircraft has been serviced by looking in the tanks and at your fuel gauges. Drain all sumps after refueling to check for contaminants.

Pilots conducting self-serve refueling are reminded to use extreme caution of their wingtip clearance when taxiing to the fueling area. During the refuel, ensure the aircraft is grounded, and, if at all possible, chocked. If chocks are unavailable during self-serve refueling, the aircraft's parking brake is a marginally acceptable substitute. Student Pilot certificate holders are prohibited from self-serve refueling.

FUEL EXPENSES AND REIMBURSEMENTS

Multi-Service Aviation Card
One Multi-Service Aviation fleet fuel card is assigned to each Louisiana Tech University aircraft. This card may be used only for aircraft fuel and oil purchases for a given aircraft, whose tail number is printed on the card. If the fuel vendor accepts the card, then the card will be used. Although the card is widely accepted, cross-country crews must still carry $100 cash or a personal credit card. This is due to the possibility that certain vendors may not accept the card, or it may fail to work for whatever reason.

The dispatcher will issue the card to cross-country aircrews. Issue and return of the card will be annotated on the flight release form and in Talon/ETA. The cards will be secured in the aircraft key storage area when not in use.

Upon return from cross-country, fuel receipts must be attached to Tach sheets, regardless of payment method. This is absolutely vital—do not blow off or lose the fuel receipt just because you personally do not think you need it. Note that the fuel service order (of which the lineman may provide the pilot a copy) is not the receipt, and is of no value to us.

Personnel are sternly cautioned to never use the Multi-Service Aviation card for any purpose other than aircraft servicing. The card is government property; misuse will result in job/education termination, and probable prosecution. Aircraft clipboards will have a plastic pocket for temporary stowage of the card during flight.

Aircrews having a requirement to purchase fuel with a personal credit card or cash will be reimbursed by the University. However, these reimbursements are not cash. Attach the receipt to the Tach sheet (as ever), and see the Administrative Coordinator to fill out the Fuel Reimbursement form. Subsequently, a check will be mailed to the individual. Note that there is a blank on the form to document why one's personal credit card was used. There are legitimate reasons why one might have do so—forgot Multi-Service Aviation card, card did not work, unplanned divert, etc., etc.—but personal preference and building up "points" on a personal credit card are not acceptable reasons.

Fuel Receipt Lost or Forgotten
Failure to provide a fuel receipt to the dispatcher upon return from cross-country flight means that the PIC (not the dispatcher, and not the administrative coordinator) has a problem which requires immediate solution (or if "immediately" is infeasible, on the next business day).
If the PIC forgets to bring home the fuel receipt, he or she will personally contact the FBO and request a duplicate receipt be faxed to the ProAv main office at 318-257-2971. Have the sender address the fax to "Attention: Tech Flight Operations."

Failure to comply with this policy will result in a charge to the student's flight account equal to the fuel's cost. If, on a dual flight, an instructor fails to comply with this policy, disciplinary action is likely.

Tax Exempt Form
Louisiana Tech University does not pay sales tax within the State of Louisiana. Pilots will present to the fuel vendor the LDR Certificate of Sales/Use Tax Exemption, when purchasing fuel at FBOs in Louisiana. If the FBO requests to photocopy the certificate, pilots will allow

such. A protected copy of this certificate will be attached at all times to all aircraft clipboards, underneath the tach sheet. Dispatchers will account for the certificate when issuing and receiving aircraft clipboards. Pilots will not lose these certificates.

Per the Louisiana Tech Comptroller, pilots who fail to present the Certificate when refueling the aircraft at FBOs in Louisiana have personal pecuniary liability for any Louisiana sales taxes charged. The same applies if the pilot presents the Certificate but the FBO (still) fails to remove the tax. If a pilot observes after departure that sales taxes were charged, he must, to avoid being charged, highlight the tax amount on the fuel receipt. The Administrative Coordinator will attempt to assist the pilot in correcting the problem, but the pilot retains pecuniary liability if that attempt is unsuccessful.

SERVICING AIRCRAFT WITH OIL

CFIs will instruct all flight students on the proper oil servicing procedures. Ensure that the oil conforms to the "approved oils" listed in the AFM. Check the MIL SPEC numbers on the oil container. Dispatchers will pre-brief aircrews, if mineral oil is required in a particular aircraft. The minimum oil level that Tech airplanes will be flown with is six quarts. However, if the engine has six quarts, do not "top it off" to seven or eight. Also, do not add a fraction of a quart to achieve exactly six; pour in the whole quart.

Avoid cross-threading and/or over-tightening the dipstick. The engine oil dipsticks on our aircraft only need to be finger-tight. There is little danger of the dipstick vibrating loose. Even if it did so, there is little danger of the dipstick going anywhere, barring sustained negative G flight, which is prohibited. Over-tightening of dipsticks is a chronic problem. It is undesirable, unwarranted, and unnecessary.

AIRCRAFT SERVICING KITS

Louisiana Tech University aircrews will follow the procedures below, with reference to the aircraft servicing kits (i.e. the "tackle boxes").

Each tackle box shall contain the following:
1. Two quarts oil. Unless specifically issued by the dispatcher, the oil will not be mineral oil.
2. One container of windscreen cleaning fluid or spray.
3. Screen wipes for the electronic displays.
4. One plastic fuel level measuring tube. ("Fuel straw"—Skyhawks only). This device will be used any time the fuel in the tank is below the fuel filler tab (17.5 gallons usable fuel).
   a. Note: The tube is calibrated only for use with Skyhawks.
5. One tire gauge. (Skyhawks only). Aircrews encountering tires that appear to have low pressure may check the tire pressure themselves. Note that the correct tire pressure is different for the 'R' and 'S' models; aircrews will make direct reference to the AFM if necessary. If pressure is low, contact qualified maintenance personnel. In the unlikely event that a Tech pilot must air up the tires, be aware that the small airplane tires fill up quite rapidly. Also note that the Arrows' kits have no tire gauges. Those are recommended to be checked by qualified maintenance personnel.

a. Additionally, note that most of our aircraft require hub cap removal, if checking the air pressure in the main gear tire(s) is required. This job would require a Phillips-head screwdriver, which is not provided.
6. One bungee cord for securing the box in the aircraft.
7. One funnel for oil replenishing.
8. One rag clean enough to properly clean a windscreen.
9. Blue paper shop towels for oil checking.

The tackle boxes will <u>not</u> contain any of the following:
1. Excess oil. Aircrews will wipe this out.
2. Empty oil cans. Aircrews using oil will dispose of the container prior to returning the box to the dispatcher, and will point out to the dispatcher the need to restock that box.
3. Trash of any sort.
4. Fuel sample cups (GATS jars). These are now considered aircraft equipment. Store them in the rear passenger's cup-holder in the Skyhawk or in the pocket behind the right rear passenger's seat in the Arrow.

Personnel are reminded that the tackle boxes and their contents are University property, for which they are liable. Personnel are also reminded that we are "all in this together," and our attention to detail in this matter reflects our care for each other and for our equipment.

The following is the correct procedure for the issuance and return of an aircraft supply and equipment box:
1. Instructor or trainee obtains tackle box for the appropriate tail number from the closet.
2. Instructor or trainee presents tackle box to dispatcher for inspection.
3. Dispatcher ensures box contents meet the above list. If it does not, dispatcher will contact the previous dispatcher and/or aircrew to find out why this is so.
4. If something significant (i.e. the fuel straw or the tire gauge) is missing, that aircraft will not be flown until such time as the matter is resolved (i.e. dispatchers will not sign flight releases or issue keys).
5. Aircrew steps for sortie, flies, and returns.
6. Aircrew polices the box, removing any empty cans, trash, or oil spillage.
7. Aircrew returns box to dispatcher, pointing out any items needing replacement or replenishment.
8. Dispatcher inspects box, accepts it from aircrew, and refills anything that needs it.

AIRCRAFT DEICING

Aircraft may be defrosted using a solution of 2/3 isopropyl alcohol and 1/3 water. The alcohol and a sprayer are stored in the dispatch closet.

Precautions:
1. Alcohol is flammable.
2. Avoid getting alcohol on your person.
3. Avoid getting alcohol on Plexiglas windscreens.

The solution listed above is effective only against light frost. Heavy frost will begin to dissolve, and become mushy, but will not come off without extensive manual work with a cloth.

Additionally, if the OAT is less than 0°C, refreezing is likely. In the case of actual snow or ice adhering to the aircraft, the alcohol solution will not work, and will not be attempted.

Pilots having a wintertime requirement to depart Ruston cross-country prior to 8 AM should advise the dispatcher the afternoon prior. The dispatcher will coordinate with Ruston Aviation for hangaring. Note that space is limited. Hangaring aircraft is not routine or guaranteed.

DIRECTIVE ON WHEN TO REFUEL

Students and instructors operating the last sortie <u>daytime</u> sortie of the day will, at sortie completion, call Ruston Aviation for immediate refueling, if indicating below 40 gallons total. This will preclude delays in beginning the next day's early morning sorties.

Instructors flying a night sortie will advise the closing dispatcher of any aircraft with less than 15 gallons per side. The closing dispatcher will leave appropriate notes on the wall-mounted clipboards for the opening dispatcher to have the aircraft refueled first thing in the morning.

These procedures do not apply when flying a designated spin aircraft.

AIRCRAFT PRE-HEATING

Flight Operations possesses a heater suitable for pre-heating airplane engines. Only Tech employees may operate the heater. Directions for its use are stored at the dispatch counter.

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SECTION 4: INOPERATIVE EQUIPMENT

MAINTENANCE DISCREPANCY REPORT

Pilots of Louisiana Tech University aircraft must report any mechanical, electrical, or flight control discrepancies, or damage to the aircraft upon detection.

Tech Form #29, MAINTENANCE REPORT ("squawk sheet") forms are available from the dispatcher, and will be used by reporting pilots. If more than one discrepancy is found for a particular aircraft, use a separate form to report each discrepancy.

After completing the form, the reporting pilot will turn it in to the dispatcher, who will then temporarily ground that aircraft and remove it from service until a supervisor or mechanic can determine the airworthiness status of the aircraft. Absent supervisor or mechanic input, the dispatcher will simply ground the aircraft. If the aircraft is subsequently grounded by a supervisor, it will not be dispatched until a mechanic has inspected the problem, and/or corrected the discrepancy. The supervisor may approve the aircraft for return to service. If the aircraft is authorized restricted operations, it will be dispatched only in accordance with that restriction.

Deferral of discrepancies will be accomplished only by operations supervisors (the Chief Instructor or his assistant) or qualified maintenance personnel. The deferral statement on the squawk sheet will include signature, type of certificate, certificate number, and any restrictions to operations. Private pilots (or greater) may, when away from home base, accomplish their own deferrals only after consultation with the Chief Instructor or his assistant. Deferrals will be in accordance with 14 CFR 91.213(d), and may result in the aircraft being restricted as follows:

"Grounded": Self-explanatory.
"Dual Only": Flight requires a Tech CFI aboard.
"Restricted": See below.
"Squawk": Item requires repair, but all normal operations are allowed.

Restrictions are as follows:
"No Solo Cross Country": Student Pilots may not take the aircraft out of the local area.
"No Night Flight": Aircraft may not be flown from sunset to sunrise.
"No IFR": Instrument flight rules flight prohibited.
"Other": Specified on the form in pen and ink.

Open/deferred write-ups will be posted at Dispatch, listing applicable restrictions. (Our aircraft do not spend long periods away from home, nor do crews generally pick up our aircraft en route. Thus, open squawk sheets are not kept in the aircraft.) Closed write-ups will be retained at Dispatch, and are considered a part of the aircraft's permanent log. When write-ups (deferred or otherwise) are repaired or required inspections accomplished, the A&P/IA/avionics tech will include his/her signature, type of certificate, and certificate number on the form, along with listing corrective actions. The "Corrective Action" block will be annotated with either a) a statement referring the reader to the date in the applicable logbook (Airframe, Engine, Avionics), or b) a statement of work performed. If the discrepancy cannot be duplicated, or was entered in error, the Chief Instructor or his assistant will so state in the "Corrective Action" block, and the form filed in the "Closed" binder.

Aircraft squawk sheets are to be written in plain English, using appropriate nomenclature. Crews describe symptoms. They do not diagnose the problem. Crews who do not know how to properly complete a squawk sheet are encouraged to see the Chief Instructor.

Dispatchers will ensure that the maintenance technician's certificate number (or repair station number, if applicable) appears at the bottom of all completed maintenance discrepancy forms. Additionally, dispatchers will transcribe, from the maintenance discrepancy form into Talon/RMS, the name and certificate number of the individual or agency completing repairs of aircraft discrepancies.

INOPERATIVE AIRCRAFT ELECTRICAL SWITCHES

Pilots who observe anomalous operation of any electrical switches in an aircraft will ground that aircraft. The two main modes of failure are 1) the switch will not move in either direction, or 2) the switch moves in both directions, but has no resistance to movement at all. Both these are considered fire hazards.

LOW OIL PRESSURE ANNUNCIATION

Pilots who observe an OIL PRESSURE annunciation with the oil pressure itself remaining in the green range will terminate training and proceed to Ruston Regional by the most expeditious routing for a full stop landing.

FLOW CHART FOR INOPERATIVE INSTRUMENTS AND EQUIPMENT

During the preflight inspection, the pilot recognizes inoperative instruments or equipment.

Is the equipment required by the aircraft's equipment list or the kinds of equipment list? [FAR 91.213(d)(2)(ii)]	If YES, the aircraft is unairworthy and maintenance is required.
If NO, is the equipment required by the VFR-day type certificate requirements prescribed in the airworthiness certification regulations? [FAR 91.213 (d)(2)(ii)]	If YES, the aircraft is unairworthy and maintenance is required.
If NO, is the equipment required by AD? [FAR 91.213(d)(2)(iv)]	If YES, the aircraft is unairworthy and maintenance is required.
If NO, is the equipment required by FAR 91.205, 91.207, etc.? [FAR 91.213(d)(2)(iii)]	If YES, the aircraft is unairworthy and maintenance is required.

If NO, the inoperative equipment must be removed from the aircraft [FAR 91.213(d)(3)(i)] or deactivated [FAR 91.213(d)(3)(ii)] and placarded as inoperative. At this point, the pilot shall make a final determination to confirm that the inoperative instrument/equipment does not constitute a hazard under the anticipated operational conditions.

FAILURE TO ACCOMPLISH THE SHUTDOWN/SECURING AIRCRAFT CHECKLIST

Failure to accomplish the "MASTER SWITCH (ALT and BAT) – OFF" step of the <u>SECURING AIRCRAFT</u> (Cessna 172) checklist or the "BATT MASTR Switch – OFF" step in the <u>STOPPING ENGINE AND MOORING</u> (PA-28R) can result in a dead aircraft battery. Additionally, in the G1000 Cessna 172, failure to accomplish the "STBY BATT Switch – OFF" step can result in a dead standby battery.

Trainees who lack the checklist discipline to turn the applicable switches off after flight will be charged a "Battery Maintenance Fee" of $280.00, if their failure results in a dead battery which <u>can</u> be recharged. If it is the case that the battery's charge is irretrievable (dead cell, etc.), and <u>cannot</u> be restored, the student will reimburse the University as follows. MAIN battery (either model of aircraft): $1,000; STANDBY battery (G1000): $1,600. These figures sound high, but they are the actual prices charged for the items in question. They are not punitive fines; the University simply must be reimbursed for unnecessary maintenance costs generated solely by the pilot. This is a flight discipline matter, as well as a financial bottom line matter. There will be no other warnings beyond this one. CFIs or opening dispatchers will report any dead batteries (with master switch left on or standby battery left armed) to the Chief Instructor, along with the name of the last pilot to operate that aircraft.

Other cases, like failure to install control locks, secure aircraft, etc. will result in documented counseling by the Chief Instructor.

Turning on the MASTER SWITCH on Skyhawk N24576 solely for ground training purposes is prohibited.

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SECTION 5: EMERGENCIES

EMERGENCY AUTHORITY OF THE PILOT IN COMMAND (PIC)

A safety of flight condition should not be allowed to become an imminent danger before the PIC or flight instructor exercises his or her emergency authority. If it is believed, after analysis of the situation, that an emergency exists or will be created, the PIC should exercise emergency authority. In an emergency situation, the PIC may take whatever action is deemed necessary.

NOTIFICATION OF AN EMERGENCY

Actions taken in emergency conditions do not require ATC clearance. However, for safety and expeditious handling during emergency situations, it is essential that ATC be advised of the pilot's plan, intentions, or actions taken on the operating frequency, or if necessary, on the emergency frequency (121.5). ATC can then inform all necessary agencies of emergency action by the pilot. If in the local area and time and circumstances permit, Tech Flight Operations should be notified on 123.5.

DIVERSION OR OFF-AIRPORT LANDINGS

Situations that require recovery at an alternate airport or an off-airport landing site should take the following into account:

Nature of the emergency or irregularity
Airplane performance and time to diversion airports
En route weather
Terminal weather
En route terrain or obstructions
En route and terminal NAVAIDs
Number, length, width, and condition of runways
Pilot familiarity with the airport
Emergency and/or medical equipment availability

Pilots who divert to an unplanned airport will contact Flight Ops for redispatch. Pilots who land at other than an airport will contact Flight Ops, and will not take off. Flight Ops will arrange aircraft security and ground transportation as needed.

Student Pilot Diverts to Monroe Regional
It is unlikely, but possible, that a requirement could arise for a solo student pilot to divert from Ruston to Monroe Regional (KMLU) during the conduct of the student's initial or area solo Unit, prior to their receiving cross country training. The most realistic scenario for this to happen would be runway closure due to an accident or incident. CFIs will train pre-solo student pilots to know at least a) how to set up the navigation needed to proceed from the local Ruston environment to Monroe utilizing either VOR or GPS, b) how to address Monroe Approach when diverting there, c) that they are to request "progressive taxi" after landing, and d) that they are required to contact Tech Flight Operations with their status after landing. CFIs are not required to actually take pre-solo students to KMLU.

PROCEDURE IF A SINGLE LANDING GEAR FAILS TO INDICATE SAFE ON THE PA-28R

Louisiana Tech University has experienced at least three instances of the PA-28R Arrow's landing gear position indicating system malfunctioning. A switch was involved, and the crew observed two (of three) lights showing safe/green, with the red gear warning light remaining illuminated. In those cases, the gear was indeed down and locked. Crews observing this malfunction will strive to have the underside of the aircraft viewed by a ground observer prior to landing. If practical, the aircraft should be landed at a towered airfield, with ARFF services.

ACCIDENT NOTIFICATION PROCEDURES

Pilots will review 49 CFR 830 for applicable definitions that relate to aircraft accidents.

If an aircraft is involved in an incident/accident, use the following procedures as a guide.

Aircraft Dispatcher: The First Responder
Promptly, upon learning of an incident or accident involving a school airplane, the dispatcher will record the following information from the person calling:
1. Name, location, and telephone number of contact.
2. Best estimate of the situation.
3. Keep the caller on the telephone and notify the Chief Instructor or Assistant Chief.
4. Notify the Department Head immediately if unable to make contact with the Chief Instructor or Assistant Chief.

Next, gather the pilot and aircraft records and give them to the Chief Instructor or Assistant Chief. Do not openly speculate about what happened or give out information to any media, to include social media, i.e. FaceBook. Most often, initial information is incomplete, confusing, and contradictory. The dispatcher will refer all inquiries of the incident/accident to the Chief Instructor or Assistant Chief, who will only discuss the matter with the Department Head or government authorities. The dispatcher may be required to serve as an assistant during the situation.

Chief Instructor/Assistant Chief:
The Chief Instructor and Assistant Chief will immediately notify each other and the Department Head.

If inquiries are received about an incident, the Chief Instructor/Assistant Chief should log the name, telephone number, and address of each person and request the reason for their inquiry or interest in the event. Generally, an example of the Chief Instructor/Assistant Chief response to an inquiry will be: "An incident/accident has occurred and an official investigation is under way. Additional information will be made public when more is known." If necessary, a University official can respond to the call when time permits.

The Chief Instructor will coordinate with the Department Head and appropriate authorities for search and rescue efforts. Notification of the FAA and NTSB will be made as soon as practical and appropriate procedures followed. The Chief Instructor will conduct an investigation.

The procedures are usually:
1. Securing any and all aircraft and flight records.
2. Site inspection with tape, camera, and maps.
3. Record of reported weather conditions.
4. Interview witnesses and obtain written statements.
5. Interview of pilot(s) and obtain written statement(s).

PHONE NUMBERS

Louisiana Tech University Flight Operations (airport):	(318) 257-5080/2
Professional Aviation Office (campus):	(318) 257-2691
Ruston Aviation (RSN FBO):	(318) 251-9098
Monroe Tower:	(318) 327-5600
Ruston Police:	911 or 255-4141
Ruston Fire Department:	911 or 255-4762
Baton Rouge Flight Standards District Office:	1-800-821-1960
Chief Instructor cellular	(478) 973-5193
Department Safety Officer	(318) 254-3502

Note: If using a Flight Ops landline phone, dial '9' prior to the digits for local calls, and '9-1' for non-local calls. Dialing '9' prior to 911 is not required, and may not work.

FLIGHT DEVIATION REPORT PROCEDURES

Aircraft Flight Operations
All pilots will operate Louisiana Tech University aircraft in accordance with the procedures and limitations contained in the Aircraft Flight Manual (AFM). In the event of an unintended maneuver that exceeds the procedures/limitations contained in the AFM, the pilot will treat the event as a deviation from aircraft limitations.

Policy and Procedures for Filing a Written Deviation Report
In the event of an inadvertent deviation from the limitations contained in the Airplane Flight Manual, the pilot is required to report the incident immediately to the Chief Instructor or operations supervisor. The aircraft will be grounded for inspection. In addition to the oral report, the pilot will submit a written report explaining the circumstances regarding the incident, using the Deviation Report form, found on the next page. This report will be presented to the Chief Instructor in the event of deviations from the Aircraft Flight Manual, this manual, Federal Aviation Regulations, or any other incident of which the Chief Instructor should be aware. Each person involved or witness to an accident, incident, or deviation of the rules, policies, and/or procedures will report to the Chief Instructor.

Disclosure Policy and Procedures for Reporting Violation of Federal Aviation Regulations
The pilot involved with an FAR violation should submit the NASA Report (as described in 14 CFR 91.25) as soon as possible after the violation and, if necessary, submit a Disclosure Report to the FAA Flight Standards District Office in Baton Rouge.

Ethics
Ethics, in both the management of the flight school and training of the students, play an important part in the school's operations. Pilots are trained to follow rules, document flights in

aircraft logs and pilot records, and submit reports. Pilots are constantly learning from new experiences and some deviations are probable. When deviations are reported, the report to the school will help bring closure to the incident. Assuming negligence and criminality were not involved, positive reinforcement is the preferred outcome for a just and informed reporting culture.

Tech Flight Deviation Report
This form is to be completed after any flight deviation by a student or flight instructor. After completion, it will be turned in to the Chief Instructor upon return to Flight Ops.

LOUISIANA TECH UNIVERSITY FLIGHT DEVIATION REPORT

Date _____ Aircraft N _____ Serial # _____

Name of PIC _____ Name of Witness _____

Street Address _____ Street Address _____

City, State _____ City, State _____

Phone # _____ Phone # _____

E-mail _____ E-mail _____

Brief Report of Incident:

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Chief Instructor Notes:

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SECTION 6: STANDARDIZATION AND FLIGHT SAFETY

MINIMUM ALTITUDES

The minimum altitudes specified in 14 CFR 91.79 will be observed.

Dual flights may set up and practice forced landings in deserted areas down to 500' AGL. The purpose of this is to allow the CFI to judge whether a safe landing could have been made. Crews will avoid property occupied by buildings. Selection of these areas must not result in complaints from the non-flying public.

Flight instructors are recommended to instruct students in simulated emergency landings while over established airports where the approach can actually be continued all the way to touchdown. Simulated engine out approaches and landings should be performed using throttle reductions only. Shutting off the mixture, fuel valves, or magnetos will not be performed.

Ground reference maneuvers, except for eights-on-pylons, shall be performed no lower than 1,000' AGL and no nearer than one mile from any structure taller than a two-story building.

AVOIDANCE OF OTHER AIRCRAFT

The pilot in command (PIC) is responsible for seeing and avoiding other traffic. Neither being in radar contact with ATC nor being on an instrument flight plan relieves the pilot of the responsibility to see and avoid other traffic. View limiting devices will be used only when an authorized safety pilot occupies the second pilot seat.

POSITIVE EXCHANGE OF FLIGHT CONTROLS

Reference AC 61-115. This advisory circular provides guidance for all pilots, especially student pilots, flight instructors, and pilot examiners, on the recommended procedure to use for the positive exchange of flight controls between pilots when operating an aircraft.

During flight training, there must always be a clear understanding between student and flight instructor as to who has control of the aircraft. Prior to flight, a briefing should be conducted that includes the procedure for the exchange of flight controls. The positive three-step process in the exchange of flight controls between pilots is a proven procedure and one that is strongly recommended.

When an instructor is teaching a maneuver to a student, the instructor will normally demonstrate the maneuver first, and then perhaps have the student follow along on the controls during a demonstration and, finally the student will perform the maneuver with the instructor following along on the controls. When the flight instructor wishes the student to take control of the aircraft, he/she says to the student, "You have the flight controls." The student acknowledges immediately by saying, "I have the flight controls." The flight instructor again says, "You have the flight controls." During this procedure, a visual check is recommended to see that the other person actually has the flight controls. When returning the controls to the instructor, the student should follow the same procedure the instructor used when giving control to the student. The

student should stay on the controls and keep flying the aircraft until the instructor says, "I have the flight controls." There should never be any doubt as to who is flying the airplane.

Flight instructors should always guard the controls and be prepared to take control of the airplane. When necessary, the instructor should take the controls and <u>calmly</u> announce, "I have the flight controls." The student will immediately acknowledge and relinquish control, allowing the instructor full and effective control of the aircraft. Anxious students can be incredibly strong and usually exhibit reactions inappropriate to the situation. If a recovery is necessary, there is absolutely nothing to be gained by having the student on the controls. Thus, the student <u>will</u> relinquish control.

Students should never be allowed to exceed the flight instructor's ability to perceive a problem, decide upon a course of action, and physically react.

Students freezing on the controls has resulted in fatalities at other pilot schools. If a student should ever fail to relinquish the flight controls upon command, he/she will be counseled by the Chief Instructor. If the behavior ever recurs, the student will be removed from the program.

PREFLIGHT INSPECTION PROCEDURES

- All aircraft preflight inspections will be conducted in accordance with, and with direct reference to, the applicable aircraft checklist.
- All required documents including aircraft (14 CFR 91.9, 91.203) and personal documents (14 CFR 61.3) are required to be aboard before flying. Contact the dispatcher if any aircraft documents are missing.
- Hobbs readings
    - o If there is any discrepancy between the Hobbs meter for a particular aircraft and the dispatch paperwork, the error must be resolved before aircraft operation.
    - o If the aircraft is operated without resolving a Hobbs error, the last pilot to fly the aircraft will be charged for the flight time.
- Ensure the aircraft is free of trash and all loose objects are secured.
- Ensure the aircraft windscreen is clean.
- Fuel samples
    - o Fuel samples should be taken before every flight.
    - o Uncontaminated fuel is returned to the tank.
- During cold weather (below freezing), pilots will ensure there is no frost on the aircraft.

GROUND AND FLIGHT OPERATIONS

During preflight inspection, pilots will visually check for obstructions near the aircraft, which could impede taxi. This check is particularly vital at night, or when the pilot has left the aircraft and returned to it.

Before leaving the parking spot after engine start, test the brakes by allowing the aircraft to move slowly forward, then stopping it with the brakes. If either or both brakes fail to work properly, shut the engine down immediately. Secure the airplane and report the discrepancy to the dispatcher. Taxi no faster than you can walk within the parking areas and at a safe speed on the taxiways. Do not run checklists while taxiing. Instead, stop the aircraft in a safe spot, and

devote full attention to the checklist. Be aware of what is behind the aircraft and where you are directing the prop blast. When returning to the parking area, give way and stop for aircraft leaving the ramp. Taxi accidents are always 100% pilot error. Use minimal braking during these operations. Taxiing at more than 1,000 RPM is unnecessary.
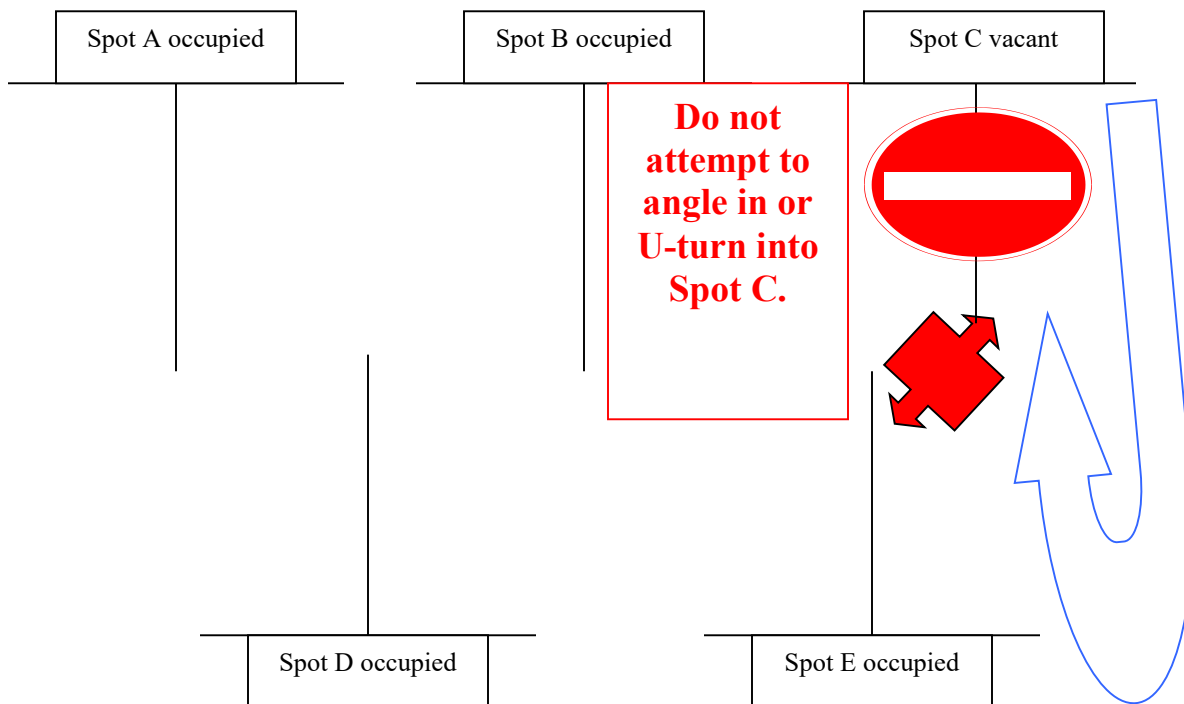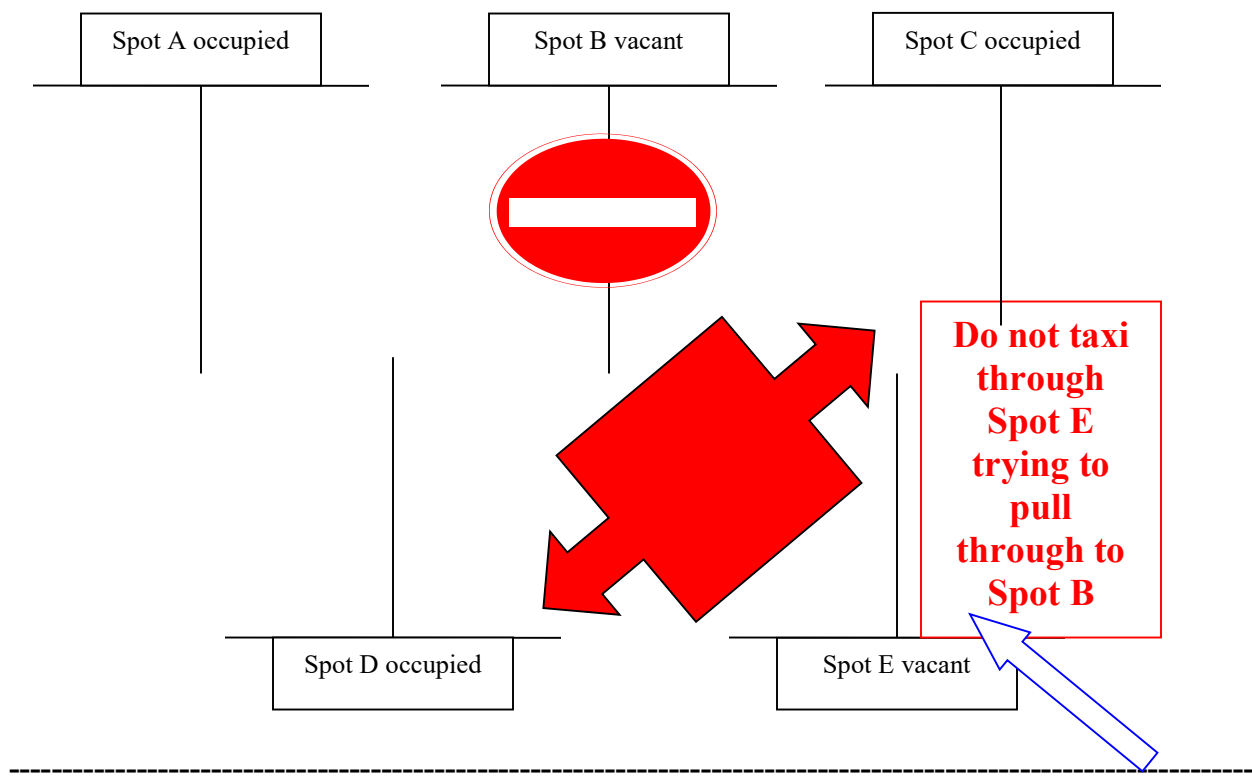
When operating on the surface at an airport for which an airport diagram exists, pilots will have the diagram open for reference. (If applicable, the aircraft's suitably zoomed MFD display suffices.)

Runway Incursion Prevention (excerpted from DOT/FAA Policy N 8900.92)
1. Read back all runway crossing and/or hold-short instructions.
2. Review airport layouts as part of preflight planning and before descending to land, and while taxiing, as needed.
3. Know airport signage.
4. Review Notices to Airmen for information on runway/taxiway closures and construction areas.
5. Do not hesitate to request progressive taxi instructions from air traffic control (ATC) when unsure of the taxi route. A pilot may call upon ATC (ground control) for help in confirming position at any time during taxi, or when holding short of a runway. Help from ATC is particularly valuable in conditions of reduced visibility.
6. Check for traffic before crossing any runway or entering a taxiway.
7. Turn on the rotating beacon while taxing.
8. When landing, clear the active runway as quickly as possible then wait for taxi instructions before further movement.
9. Study and use proper radio phraseology as described in the Aeronautical Information Manual in order to respond to and understand ground control instructions.
10. Write down complex taxi instructions at unfamiliar airports.
11. When holding short and when in takeoff position, observe the multifunction display map view on appropriately equipped cockpits, to confirm the airplane is where it is intended to be and that it is oriented as expected.
12. When in takeoff position one pilot should verbally announce that the correct runway and departure procedure are selected in the flight management system when so equipped, and that the airplane's heading agrees with the assigned runway for takeoff.

Parking
Louisiana Tech University pilots will not attempt to taxi between two aircraft at an angle for the purpose of achieving a "pull-through" parking job. Wingtip collisions can result from such maneuvers. The diagrams below show two examples of prohibited taxi maneuvers. The first example below did indeed result in wingtip damage to two aircraft, despite the CFI deplaning and attempting to marshal the pilot into the spot. The maneuver depicted in the second example was pulled off by a student on initial solo with, miraculously, no damage.

Spot A occupied

Spot B vacant

Spot C occupied

Do not taxi through Spot E trying to pull through to Spot B

Spot D occupied

Spot E vacant

Spot A occupied

Spot B occupied

Spot C vacant

Do not attempt to angle in or U-turn into Spot C.

Spot D occupied

Spot E occupied

"Tech" Ramp Parking Procedures (refer to Appendix 1)

Although not actually Louisiana Tech University property, the south ramp extension (or "Tech" ramp), built several years ago near Flight Operations, is used (exclusively) by Tech pilots as follows. The south ramp extension presently has eight parking spots, which we designate Spots 1 through 8. Aircrews will use extreme caution in this parking area. It is not particularly roomy.

Tech aircrews will use the sidewalk to transit between Flight Ops and the ramp. Do <u>not</u> "proceed direct" on foot across the grass or dirt from the Flight Ops exit straight to your assigned airplane, wherever it is parked.

In addition to the eight spots adjacent to Flight Ops, there are also two west-facing parking spots on the older portion just north of "our" ramp; we designate those as Spots 9 and 10. Of these two, the northern one, Spot 10, is utilized only as detailed below. See the diagrams at Appendix 1 of this document for the locations and numbering scheme for Spots 1 through 10. Except for Spot 9 and Spot 10, none of the spots are "pull-through" at this time. (Future ramp construction may make them so.)

The Tech ramp cannot hold the entire Tech fleet. When applicable, Tech crews will use those spots on the old south ramp as pictured in Appendix 2. This applies even if other spots offer the chance to "pull-through."

Regardless of the occupancy, or lack thereof, of the parking spots on the Tech ramp, aircrews will not attempt to U-turn into these spots in efforts to avoid towing. Failure to comply with this instruction will likely result in excursions off of the concrete, which are undesirable.

Our complex airplanes and the designated spin airplane will normally use Spots 1, 2, and 3. Departing from Spots 1, 2, and 3 requires crews to hand-tow the airplane forward and left (facing north) onto the taxi line prior to engine start. Pilots' failure to comply with this instruction will be considered a violation of safety, and will be handled accordingly.

Spot 4 is the furthest southeast west-facing spot. To enter this spot, clear the area for personnel, taxi the airplane to the southern edge of the ramp without putting the propeller over the grass, stop, and shut down the engine. Then, manually push it back into Spot 4, turning as needed.

The correct way to park in Spots 5 through 8 is to stop the airplane on the yellow taxi line facing south, beyond and perpendicular to the desired spot. Then, using the tow bar, manually push the airplane into the spot. Taxiing aircrews will <u>not</u> "j-hook" towards occupied parking spots in an effort to achieve a straight push back. This technique is dangerous and unnecessary.

<u>To minimize interference with Arrow ground operations, Skyhawk crews will treat Spots 5 and 6 on the new south ramp as their "least preferred" parking.</u> Absent Chief Instructor permission, Spot 4 will not be used. Maximize the use of pull-through Spot 9 and the five spots on the old ramp (Spots W1 through W5). (See Appendices 1 and 2.)

Regardless of whether Spots 9 and/or 10 on the Tech ramp are occupied, all Tech aircrews will honor and use the painted taxi lines.

Whether there are any vacant spots on the Tech ramp may be difficult to determine when taxiing in after flight. If aircrews have any doubt as whether a spot on the new south ramp is available,

they should contact the dispatcher on 123.5. The dispatcher will then observe Spots 1 through 8, and assign one if available.

At night, the Ruston Regional ramp can be dark in some areas. Aircrews will use extreme caution when conducting night ground operations.

Aircrews exiting the Tech ramp should be observant for activity around the City of Ruston's T-hangars.

Utilization of Spot 10 for Temporary Arrow Parking
1. Each Louisiana Tech PA-28R-201 Arrow is equipped with a set of wheel chocks. The chocks are aircraft equipment. Do not leave them lying on the ramp when going to fly. Instead, once the aircraft's parking brake is engaged, stow the chocks in the cargo compartment. If the chocks go missing, then the entire procedure below is null and void.

2. Spot 10 is to be utilized by Arrow crews only for very limited durations. All pilots will exercise due caution when Spot 10 is occupied by personnel and/or an airplane.
   a. Pilots and dispatchers will not attempt ad hoc coordination of parking Skyhawks in Spot 10.
   b. Skyhawk crews doing ground ops on Spot 9 should take appropriate precautions if an Arrow crew is readying to depart from or is arriving into Spot 10.

3. When operating during normal Dispatch hours, Arrow pilots will, upon clearing the runway after their final landing but prior to entering the south ramp, contact Tech Flight Ops on 123.5 for parking instructions. (Note that if an Arrow crew experiences a malfunction or discovers a maintenance discrepancy during flight which will obviously preclude an immediate subsequent flight, then no call for parking instructions is needed.) The dispatcher on duty will observe the flight schedule in Talon/ETA, and reply with one of the following:
   a. "Arrow xLT, normal parking." Self-explanatory. Utilize Spots 1, 2, or 3.
   b. "Arrow xLT, Spot 10." This indicates to the pilot(s) that their aircraft will soon fly a follow-on sortie, and they should park in Spot 10. For these purposes, "soon" means in the next 30 minutes and the next trainee scheduled to fly the Arrow is present at Flight Ops. Absent radio contact with the dispatcher, Arrow crews will not assume that they "know" that parking in Spot 10 is warranted.

4. Spot 10 lacks tie-down ropes or straps. The crew will accomplish all normal shutdown checks, chock the nosewheel, and then release the parking brake.
   a. If the follow-on crew ground aborts for whatever reason (discrepancy found in the preflight inspection, failed engine-start, weather rolls in unexpectedly, etc,) then that crew will be responsible to reposition the aircraft to Spot 1, 2, or 3.

5. Approximately 52' separate the center of Spot 10 and the center of the taxi lane just north of and adjacent to it. Successful exit of Spot 10 (in an Arrow) will require substantial application of right brake in order to negotiate the U-turn called for. This U-turn, however, need not be initiated immediately upon coming out of the spot. It may be better to taxi forward to the taxi line and make two 90-degree turns to the right. In any event, if any doubt exists as to wingtip clearance from the airplane occupying Spot W-1, shut down the engine and tow as needed.

6. All crews must be observant when entering parking while Spot 10 is occupied. In particular, if an Arrow on Spot 10 has its engine running, an advisory radio call is appropriate when approaching it from the rear for the purpose of entering the Tech ramp.

Old South Ramp, Hangaring Aircraft in T-Hangars, and Parking Spot for Hangared Aircraft at Ruston Regional (see Appendix 2 for the numbering convention of spots)
Parking Spots W1 through W5 on the old south ramp are considered reserved for Tech airplanes. Use extreme caution for ground vehicles in this area. Unless otherwise instructed (by FIF or the dispatcher), Tech crews should not use Spots E1-E9.

At times, Louisiana Tech may store aircraft in the City of Ruston's T-hangars. Pilots issued a hangared aircraft will observe the following procedures.

1. A flight instructor or dispatcher must be present and supervise the removal of the aircraft from the hangar, unless Ruston Aviation personnel happen to pull it out for you (which they are not obligated to do). Use extreme caution for wingtip clearance during this procedure.
2. If the hangar is locked upon your arrival, contact Ruston Aviation.
3. The hangars' overhead doors have manual latches on both sides and where the door meets the floor. We do not intend to utilize the floor latches. Prior to opening the overhead door, pilots will ENSURE that all manual latches are disengaged, and that the man door is shut.
4. The green (up) and red (down) buttons must be held continuously for overhead door operation.
5. The overhead door will be opened completely prior to moving the aircraft in or out of the hangar.
6. The aircraft will be towed clear of the hangar prior to engine start.
7. The hangar's overhead door will not be left open when unattended. Close the door prior to departing in the aircraft. Do not lock either the overhead door latches or the man door. Leaving the hangar unlocked presents no security issue, because all our aircraft, hangared or not, will have all doors and windows locked when not in use.
8. After flight, coordinate with the dispatcher, if available, to determine if returning the aircraft to the hangar is required. If follow-on sorties for that aircraft are planned anytime during the remainder of the day, utilize any available "Tech" spot (or park as directed).
9. If fuel is less than half tanks during taxi-in, call for fuel prior to hangaring.
10. The aircraft will be chocked (inside the hangar) when not in use. The aircraft's parking brake will be released prior to the pilot(s) leaving the hangar.
11. If night flight of a hangared aircraft is intended, coordinate in advance with Ruston Aviation.

Procedures for Starting and Taxiing Aircraft
    Engine Starting Procedures:
- Engine start will be in accordance with the AFM/POH or the provided checklist.
  - Do not over-prime the engine.
- The parking brake will be set before engine start.
- The anti-collision light system will be activated and the area cleared by calling "clear" out of the pilot's window. At night, the navigation lights will be turned on.

- Cold weather starts will be in accordance with the AFM/POH. In addition, Louisiana Tech University pilots operating Louisiana Tech University aircraft are prohibited from attempting engine start when the ambient air temperature is below 30° F (-1° C). The intent of this restriction is to reduce damage to aircraft batteries and starters, and to enhance engine oil flow and lubrication. This prohibition has several exceptions as follows:
    - The aircraft has been hangared overnight.
    - The aircraft is moved into a heated hangar and warmed prior to the attempt.
    - The aircraft engine is pre-heated with a gas-fired heater or by electrical means.
    - The aircraft has flown in the preceding two hours, and is being re-started for departure (as in cross-country operations).
    - The Chief Instructor authorizes the attempt.
- Louisiana Tech University pilots will treat the RECOMMENDED STARTER DUTY CYCLE (under "Normal Procedures" in the AFM/POH) as a "Limitation."
- After starting, taxi forward and immediately perform a brake test.

Taxi Procedures:
- Louisiana Tech University aircrews will yield to moving fuel trucks.
- Always taxi with the lowest power setting possible and no faster than a brisk walk, in order to avoid excessive wear of brakes.
- Place the flight controls in the correct position relative to the wind.
- Differential braking turns should be avoided if possible.
- Students and instructors should be familiar with the approved aircraft marshaling hand signals contained in the Aeronautical Information Manual (AIM).
- If helicopter traffic is observed in the area while taxiing to Runway 36 at Ruston Regional, aircrews will hold short line at the southern end of the parallel taxiway. If helicopter traffic is observed during Runway 18 operations, crews should remain in their parking places until the copter is observed to be clear of the helipad.
- Taxi or TAXI/RECOG lights will be on during night ground operations; these should be turned off if holding short of a landing aircraft.
- Skyhawk crews experiencing irregular engine idle speed or fuel flow on the ground will comply with the AFM's FUEL VAPOR PROCEDURES.

Avoidance of Other Aircraft in Flight and on the Ground
- Each pilot is responsible for collision avoidance in flight and on the ground.
- Each aircraft occupant is responsible for assisting the pilot and noting conflicting traffic.
- Collision avoidance in flight:
    - Strobes will be used at all times while airborne, unless their use creates a hazard.
    - Position lights will be used from sunset to sunrise.
    - Pilots will comply with 14 CFR 91.111 and 91.113.
    - Pilots/occupants will maintain a continuous scan for other aircraft unless wearing a view-limiting device.
    - Pilots on training flights in the local practice areas will:
        - Self-announce their intended practice area.

- Maintain listening watch on CTAF frequency. Consider monitoring Tech Flight Ops.
- Alter their chosen practice area, if advised another aircraft is there.
- Use the assigned practice area, if specifically assigned by Dispatch.
  - Traffic Pattern Operations:
    - Will be conducted in accordance with the AIM and the Chart Supplement.
    - Landing (night) or taxi lights/TAXI/RECOG (day) will be on for departure and when entering a traffic pattern.
  - No aircraft will be operated in formation flight without approval and pre-brief by the Chief Instructor.
- Collision Avoidance on the Ground:
  - Vigilance while taxiing must be exercised by all occupants.
  - If encountering a ground vehicle while taxiing, the pilot's initial tendency will always be to yield the right of way.

Pre-Takeoff Checks

Pre-takeoff checks will be accomplished in accordance with the applicable checklist.
- Aircraft ground checks (run-ups) will be accomplished in the designated run-up area (if available), well clear of the hold short line for the runway chosen, and angled into the wind, if possible.
  - At Ruston Regional, the taxiway leading from the south ramp to the approach end of Runway 36 does not offer a run-up area. Given the normal pace of students accomplishing required pre-takeoff checklists, the potential for blocking other traffic awaiting takeoff exists. Tech crews intending to take off on Runway 36 will utilize the "old" run-up area, which is abeam the Runway 36 aiming point markings, short of the parallel taxiway. At this location, crews will stop the aircraft on a heading of 045º and accomplish the applicable checklist(s) up to the "LINE UP ITEMS." Crews will then pause the checklist and taxi to the hold short line where they will complete the BEFORE TAKEOFF checklist.
- Aircraft failing an engine run-up check at the northern end of KRSN will normally be taxied down Runway 18 and back to parking. Clear final approach and announce intentions over CTAF. If using the parallel taxiway to return to parking, verify it is clear (to preclude blocking a departing aircraft).
- The technique of performing a 360° clearing taxi turn (rotation) in the run-up area prior to takeoff is generally unnecessary. This technique will only be performed if dictated by unusual circumstances. It will not be performed if another aircraft is sharing the run-up area, and will not be performed if another aircraft is behind you or approaching you.
- If crews are required by circumstances to accomplish the engine run-up in other than a designated location, they will clear behind the aircraft.

Takeoffs and Landings
- Except in an emergency, no aircraft will be landed anywhere other than public airports listed in the Chart Supplement, unless special authorization is gained from the Chief Instructor in advance.
- Solo training flights are authorized to make touch and go landings during the day only.
- Rejected Landings (Go-Around):
  - All solo go-arounds will maintain runway heading until reaching departure end and at least 700 ft AGL before turning crosswind.

- No student, while acting as the pilot in command, may perform an intersection takeoff.
- Grass field landings/take-offs require Chief Instructor approval.
- Avoid excessive use of brakes.

Ground Handling Procedures

Aircrews are reminded that our airplanes are a limited, fragile, expensive resource. All Louisiana Tech University airplanes are equipped with tow bars, which are intended to be used when the aircraft is moved on the ground. Airmen are reminded that that extreme caution must be employed when pushing down on the tail for the purpose of moving the nose of the airplane. This technique is problematic, because the main gears serve as a fulcrum. If excessive downward force is applied, the elevator (which is in the down position) can strike the ground, which can and has resulted in elevator damage.

If the PIC determines that nose of the aircraft must be moved by pressing down on the tail, the following procedures will be followed:
1. The aircrew will stop and consider whether tow bar use might be more appropriate.
2. The tarmac will be dry.
3. The control lock will be installed. (This raises the elevator somewhat.)
4. No down force will ever be applied to the horizontal stabilizer.

Post Flight Inspection

Before leaving the aircraft, the pilot in command or flight instructor will perform a post-flight inspection of the aircraft's exterior, to include the tires. If cross-country and the crew will be departing the airport, the airplane will be locked and the fuel card and receipt secured.

CRITICAL TO FLIGHT SAFETY. While conducting routine 100-hour inspections, our aircraft maintenance technicians have reported multiple instances of finding used, expended, AA alkaline batteries discarded and left in the cockpits of our airplanes. This is unacceptable. These batteries contain corrosive chemicals, which can leak out due to either physical damage to the battery or simply age, and those chemicals can cause airframe damage (to aluminum) rapidly. Additionally, batteries are hard metal objects which, if uncontrolled, could lodge anywhere, to include in a position to interfere with flight controls. Tech pilots WILL police the cockpits/cabins of Tech airplanes during post-flight. If a battery is known to be lost in the cockpit and the crew cannot locate it despite making appropriate, serious efforts, the crew will complete a squawk sheet so stating, and the aircraft will be grounded and delivered to maintenance.

TAXIING AT RUSTON REGIONAL

Unless the southern exit from the south ramp is physically blocked, Louisiana Tech University pilots are prohibited from taxiing northward on the south ramp when jet aircraft are parked at Ruston Aviation. In general, Tech pilots will favor exiting the south ramp via its southern exit.

Tech pilots will exercise extreme vigilance when taxiing. Tech flight instructors will emphasize ramp safety to their students.

During taxi, Tech pilots will, to the maximum extent possible, avoid sharing taxi lanes with Ruston Aviation fuel trucks and line personnel. We have ample parking, so it should be

exceedingly rare that there is any need to do so. If a taxi situation arises that would make wingtip clearance from a ground vehicle or another aircraft even remotely questionable, pilots will shut down the engine and tow the airplane to the desired spot, using wing-walkers if available.

USE OF AIRCRAFT LIGHTS

Operate exterior lights as follows:

1. Turn on the rotating beacon whenever an engine is running, or about to be started.
2. Navigation lights are operated in accordance with 14 CFR 91.209.
3. Strobe lights should not be illuminated during taxi.
4. Rotating beacon and strobes may be turned off in IMC.
5. Extinguish landing lights when stationary.
6. At night, when entering a runway for takeoff or taxiing into position and holding for takeoff, illuminate all exterior lights.
7. During the Before Taxi check, pilots will turn on the taxi or TAXI/RECOG lights in lieu of the landing light during daytime flight operations.
8. If the landing light is utilized for takeoff, turn it off during the Climb check.
9. Strobes will not be operated on the ground. Strobes will be on in flight unless safety of flight dictates otherwise (i.e. strobes disrupting pilot's vision in night/IMC); strobes are not "optional."

USE OF CHECKLISTS

All aircraft operated by Louisiana Tech University must have on board an approved checklist. The checklist is to be used as a training aid as well as a safety measure. The pilot in command is responsible for ensuring the checklist is used in the prescribed manner. Tech checklists have been compiled from the factory data and pertinent regulations, rules, and procedures.

Cessna 172S and Piper PA-28R-201 Checklists

The Louisiana Tech University *Cessna Model 172S Checklist, NAV III Avionics – GFC 700 AFCS* and *Pilot's Checklist, Piper PA-28R-201* are standard for use in our aircraft. All students are required to fly with their own copy of the applicable checklist. The checklists are locally-produced, lightly modified versions of the AFM Sections 3 and 4 checklists. Students must purchase them from the Administrative Coordinator. Students will write their name on the cover, post any applicable checklist revisions, and ensure their checklist's cover reflects the most current revision (either pen-and-ink or preprinted).

Each Louisiana Tech stage check will begin with the check instructor inspecting the student's checklist for the aircraft type to be used. If the checklist is not in order, the (flight or simulator) line item Preflight Preparation will be considered Unsatisfactory, and an overall Unit grade of 'F' will be issued by memorandum and placed in the student's training folder. The flight or sim will be cancelled, and will not occur on that day. A No Show (with charges, if applicable) will be issued, with the reason being "Student Not Prepared."

CFIs will be issued one copy of each checklist at no charge. If a major (multi-page) revision is released, a replacement will be issued at no charge.

Further notes on checklists:

1. The checklists are not disposable. Pilots will write their name on them at the time of issue or purchase. If you find someone's checklist, please return it to the individual, or to the dispatcher.

2. For cost reasons, the checklists are not laminated or coated. Avoid getting liquids on them.

3. The checklists include an extensive approach briefing guide. Pilots are intended to brief applicable items only.

4. Engine starting with external power is, for space reasons, purposely omitted from our version of the checklists.

5. Minor checklist changes will be issued via FIF, and manually written in with pen and ink. If a change is substantial, but limited to one or a few pages, an individual page or pages will be issued, to be placed onto/over the existing page(s), since pages are not removable.

6. "AS REQUIRED" is virtually never intended to be stated by the pilot as a response to the added items. It is intended to force a pilot to response to a checklist challenge with suitable words or action. Correct responses to "As Required" will vary, depending on the situation.

Louisiana Tech Form 27
Louisiana Tech University Form 27, Cessna 172R/S Checklist remains available and will be used (only) when appropriate.

PRACTICE AREAS

Practice areas have been established to avoid concentration of training flights in one area, and so that students in the pre-Private stage of flight training remain within 25 nautical miles of Ruston. Each practice area is located such that an airport on its outer boundary can be used should a diversion be necessary due to unfavorable conditions at Ruston. Student Pilots must be properly endorsed by their flight instructor to practice takeoffs and landings at these boundary airports. It is important that pilots engaged in local training flights remain within the boundaries of their assigned practice areas in order to avoid potential conflicts.

Northeast Area
From RSN - a straight line extending east from RSN to the town of Calhoun, from Calhoun a straight line extending north to the Farmerville airport, then a straight line extending northwest to the town of Bernice, from Bernice a straight line extending south to the Ruston airport.

Tech pilots conducting ground reference maneuvers and/or forced landing approach training in the northeast practice area will avoid the Squire Creek housing development and golf course. Pilots operating solo local VFR training sorties will avoid the northeast practice area unless all of the other three areas are occupied.

Northwest Area
From RSN - a straight line extending west from RSN to the Arcadia airport, from the Arcadia airport a straight line extending north northwest to the Homer airport, then a straight line

extending east to the town of Bernice, and from the town of Bernice, a straight line extending south to the Ruston airport.

Tech pilots conducting ground reference maneuvers and/or forced landing approach training in the northwest practice area will operate not less than six nautical miles (6 NM) from the Ruston Regional Airport (KRSN), avoiding when possible overflight of the villages of Vienna, Dubach, Grambling, and Simsboro.

Southeast Area

From RSN - a straight line extending south southeast from RSN to the Jonesboro airport, from the Jonesboro airport a straight line extending east northeast to Chatham Lake, then a straight line extending north to the town of Calhoun, and from Calhoun a straight line extending west to the Ruston airport.

Southwest Area

From RSN - a straight line extending south southeast from RSN to the Jonesboro airport, from the Jonesboro airport a straight line extending west northwest to the town of Bienville, from the town of Bienville a straight line extending north to the Arcadia airport, and from the Arcadia airport a straight line extending east to the Ruston airport.

Practice Area Deconfliction

Louisiana Tech pilots may self-report their position on 122.7. Include altitude in these calls. Pilots need not state their specific maneuver in the call—just say "maneuvering."

Tech aircraft generally do not share practice areas, unless all four areas are occupied. In this case, pilots will deconflict verbally, preferably by altitude.

LOCAL AREA MAP

Louisiana Tech University Department of Professional Aviation Flight Operations Manual
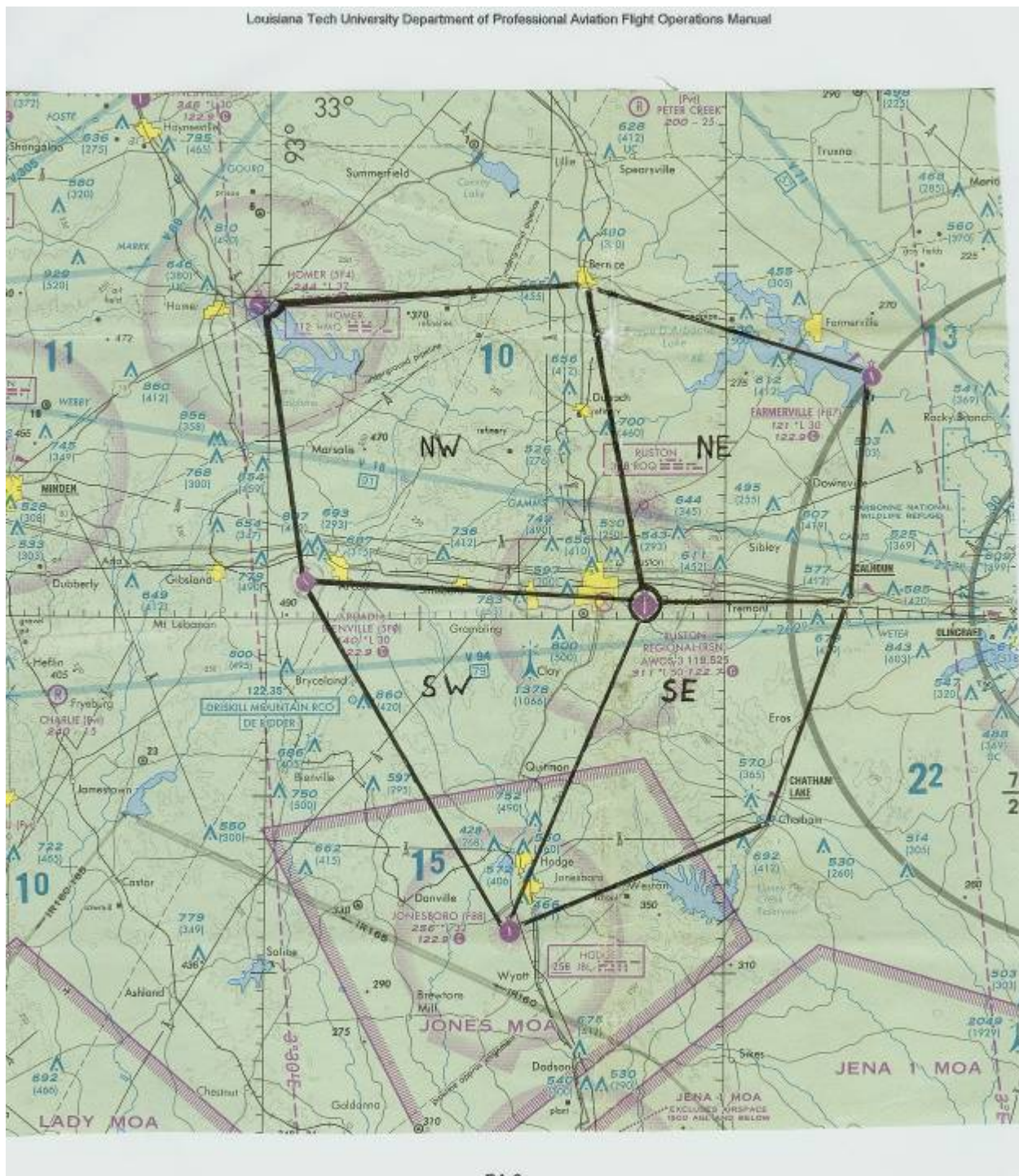
APPROVED CROSS-COUNTRY AIRPORTS FOR STUDENT PILOT CROSS-COUNTRY FLIGHTS

Pre-Private solo cross-country destinations should be selected from the following list. The Chief Instructor may approve other airports.

CITY	IDENTIFICATION	AIRSPACE
Alexandria, LA	AEX	D
Camden, AR	CDH	E
Shreveport, LA	SHV, DTN	C
Jackson, MS	HKS	C
Little Rock, AR	LIT	C
Longview, TX	GGG	D
Texarkana, AR	TXK	D
Natchez, MS	HEZ	E
Vicksburg, MS	VKS	E
Monticello, AR	LLQ	E
Hot Springs, AR	HOT	E
Pine Bluff, AR	PBF	E
Magnolia, AR	AGO	E

Commercial and Instrument Stages

Airports should be selected based on its distance from Ruston, the availability of instrument approach procedures, and the range of the aircraft. Airports should also be selected based on the availability of fuel on the field. The Chief Instructor must approve destinations beyond 300 miles from Ruston.

PROHIBITIONS AND SPECIAL INSTRUCTIONS (OF AIRPORTS)

Branson West-Emerson Field (FWB) is prohibited for use by Louisiana Tech University aircrews that lack a flight instructor.

Esler Field (Alexandria, ESF) requires Chief Instructor permission.

Jackson-Medgar Wiley Evers International Airport (JAN) is prohibited to all Louisiana Tech University crews.

Natchitoches Regional Airport (IER) is prohibited to all Louisiana Tech University crews.

Dallas Love Field (DAL) is prohibited to all Louisiana Tech University crews.

Island destinations are prohibited.

Jonesboro (F88)

Tech pilots will avoid the village of Hodge, LA (pictured below) by three nautical miles.

Straight-in approaches to Runway 18 at Jonesboro are prohibited.

Pilots, having avoided Hodge as noted above, will arrive to F88 from 090° clockwise through 270° magnetic, overflying the airport as needed to make a normal left downwind for the VFR pattern.

Pilots departing F88 are recommended to utilize Runway 18 unless tailwinds exceed 10 knots. If winds are stronger than 10 knots from the north, pilots are recommended to choose another destination.

MANUAL FLIGHT PLANNING

All Louisiana Tech University pilots in the Private Pilot course will accomplish their cross-country navigation logs manually, using pen-and-paper log forms, flight manual climb and cruise performance data, forecast winds aloft, and mechanical E6-B computers.

Student Pilots will plot their routes on paper sectional charts. This will require ordering the chart(s) in advance.

RULES FOR IN-FLIGHT IPAD USE

Student Pilot certificate holders are not authorized to use their GPS-equipped iPads in flight on any dual navigation sortie. Louisiana Tech University cannot police iPad use on these pilots' solo cross-countries, but we recommend they use their iPad only for situational awareness, while practicing real dead reckoning, use of radio aids to navigation, and pilotage. Also, these pilots are not allowed to use online flight planning tools (computer flight plans), whether dual or solo. The intent is for Student Pilots to understand manual flight planning and actual dead reckoning. iPads may be used for Chart Supplement information. However, students tend to fail to properly utilize the legend pages when using iPads for this purpose in lieu of a paper book.

Private pilots and above may use iPad or tablet PCs as desired, for both flight planning and in the cockpit.

FLIGHTS TO UNPAVED AIRPORTS

Except in case of emergency, Louisiana Tech University aircraft will not be flown to other than paved airports without express Chief Instructor approval. Violations of this policy will have negative results for the individual(s) involved.

POSTFLIGHT PROCDURES/SECURING AIRCRAFT

Professional pilots ensure their aircraft are tied down, secured, and policed prior to leaving. After flight, pilots will install flight control locks, pitot tube covers (Skyhawks only), and air inlet plugs, remove garbage in, on, or around the aircraft, lock the aircraft doors, call for fuel if appropriate, and return the aircraft servicing kit to the storage closet (after cleaning and replenishing it). Failure to accomplish the above displays a lack of effort and caring, and will result in counseling and documentation by the Chief Instructor. If the behavior is repeated, it will result in removal from the flight program or termination of employment, as applicable.

As noted above, pilots will inspect aircraft tires during postflight. Report tire discrepancies (cords showing on the tire) to the dispatcher on the normal maintenance discrepancy report form.

LOGGING OF PILOT TIME

PIC Time
Every sortie flown will have one pilot in command designated as defined in 14 CFR 1.1. On dual flights, this person is the CFI. In the case of two rated pilots flying together, it will be clearly defined in the preflight brief. Personnel are encouraged to log this time in a separate column in their logbooks, as it is (generally) what major airlines are asking for on job applications. Personnel are encouraged to start this column now, while they are relatively low-time. Student pilots only log Part 1 PIC when they are the sole occupant of the aircraft.

Pilots also log PIC in accordance with 14 CFR 61.51. This means pilots log PIC when acting as sole manipulator of the flight controls in an aircraft for which they are rated, even while receiving dual instruction. Private pilots <u>are</u> allowed to log PIC while on an IFR flight plan or in IMC, when receiving instrument instruction (assuming they're rated in the airplane, which they are). Pilots are encouraged to log Part 61 PIC time in a separate column in their logbooks, for the purpose of filling out FAA Form 8710. Student pilots log Part 61 PIC only if they are the sole occupant.

In the case of pilots flying under simulated instrument conditions with a safety pilot, the safety pilot is the Part 1 PIC, while the pilot training also logs PIC IAW Part 61.

LOGGING TRAINING DEVICE TIME AND FILLING OUT THE FAA FORM 8710-1, SECTION III, RECORD OF PILOT TIME

When logging students' aeronautical experience in the Mentor aviation training devices (ATDs), Louisiana Tech flight instructors will use the following guidance.

Per 14 CFR 61.1(b):
Flight training means that training, other than ground training, received from an authorized instructor in flight *in an aircraft*. (Emphasis added.)

Per Advisory Circular 61-136A, Appendix 4:
Authorized instructors utilizing an FAA-approved ATD for airmen training, pilot time, and experience requirements are required to log the time as dual instruction and as basic aviation training device (BATD) or advanced aviation training device (AATD) time appropriately. Any columns that reference flight time should remain blank when logging ATD time. Simulated

instrument time can be logged in an ATD, but only for that portion of the training session when the visual component is configured for instrument meteorological conditions (IMC) and the pilot is maintaining control solely by reference to the flight instruments. Logging time in this fashion will allow a pilot to credit this time towards the aeronautical experience and recent flight experience requirements specified in 14 CFR part 61 or 141.

Logging of Time in the ATD
Commercially available paper pilot logbooks vary as to whether they reference "Dual Received," which is not an FAA-defined term, or "Flight Training Received," which is defined above. This difference in logbook column layouts creates a conundrum in trying to comply with the AC paragraph above. The CFI <u>could</u> log device instruction as dual received (as mentioned in the AC), and we have historically done so. However, the CFI <u>should not</u> log (and should not have been logging) device instruction as flight training, due to 14 CFR 61.1(b).

Additionally, most logbooks have a column entitled "Simulator" or "Flight Simulator." By the modern FAA definition, our Mentor devices are *not* simulators; they are aviation training devices (ATDs). Our old Frasca Level 6 device also was not a simulator, but a flight training device (FTD). It is somewhat undesirable to log Simulator time in an FTD or ATD, as this is not really accurate.

Although we have traditionally done so, it is also undesirable to commingle instrument time logged in an aircraft with instrument time logged in a device. The reason for this is explained below. However, we do most definitely use device time to meet required aeronautical experience minimums. So, this time must be reflected in the logbook.

In order to create an accurate, comprehensible standard and comply with all the above in a typical logbook when using the Mentor device to log aeronautical experience, Tech CFIs and students will log device training as follows in the student's logbook. First, each student will modify his logbook's columns as follows: 1) Strike through "Simulator" and title that column "Device" on each page used, and 2) title an otherwise blank column in the logbook "Device Sim Instrument." The CFI will then log ATD training time numbers as follows:

- Duration of Flight column   blank
- Single Engine Land column   blank
- Device column   total time of the event
- Device Sim Instrument column   time with the device set to simulate IMC
- Instrument-Actual column   blank
- Instrument-Simulated/Hood column blank
- Dual/Flight Trng Received column   blank*
- PIC column   blank

*The fact that the CFI signs the logbook serves to meet the AC's requirement to "log the time as dual instruction."

8710/IACRA Record of Pilot Time
In addition to reducing the likelihood of students accidentally misstating their logged aircraft time, the foregoing is intended to address the following problem.

FAA Form 8710-1 requires applicants to separate "Instruction Received" and "Instrument" times in the "Airplanes," "FTD," and "ATD" rows of the "Record of Pilot Time." This has historically proven to be challenging for our students to do with accuracy. Utilizing a blank column in the student's logbook to log simulated instrument time accomplished in training devices should mostly solve this problem. An applicant utilizing this method can transfer the total in the "Device Sim Instrument" logbook column directly onto the IACRA 8710 grid, in the ATD row's Instrument block. (Personnel having logged FTD time, see below.) The figure used in the Instrument block in the Airplanes row of the 8710 would then simply be the total of the applicant's logged Actual Instrument and Simulated Instrument times, which were logged (only) in an airplane.

Additionally, Form 8710 has "Instruction Received" blocks in the Airplane, FTD, and ATD rows. If times are logged as directed above, the student will be able to directly transfer his logged "Dual Received" time directly into 8710's Airplane-Instruction Received block, and will be able to directly transfer his Device time total directly into the ATD-Instruction Received block.

It is critical that the above be accomplished accurately, so that the viewer of the 8710 (a DPE or an ASI) has no reason to distrust the applicant's logbook, as to aeronautical experience.

All Tech flight students will retroactively put their logbooks into compliance with the above logging procedures prior to their next stage check, re-totaling applicable columns. Simply alter each instance of device training logged, and initial by the new totals at the bottom of each column on each page. Check instructors will check for compliance during stage checks.

Tech pilots who have logged time in both the old Frasca Level 6 FTD and the Mentor ATDs (or, possibly, other devices) will have a slightly more complicated process, as they will, for the purposes of filling in an 8710, need to separate those times from each other. However, this should apply to relatively few students, and, furthermore, the math should only have to be done one time.

Students possessing logged time instrument time in aircraft other than airplanes will have to take additional appropriate measures to ensure accuracy.

Tech CFIs are recommended, but not required, to comply with the above logging procedures for their own pilot logbooks as well, as it will simplify future 8710/IACRA applications.

OBJECTS ON THE GLARE SHIELD

To preclude irreparable damage to the insides of aircraft windscreens, pilots will refrain from placing objects on the glare shield atop the instrument panels of Louisiana Tech University aircraft. The sole exception to this rule is that the aircraft key may (and will) be placed atop the instrument panel prior to engine start.

MANEUVER STANDARDIZATION

Techniques for various VFR and IFR maneuvers are listed in the Pilot and Instructor Techniques document, found on the Professional Aviation website. Several recommended Arrow techniques are found below.

Stabilized Approach Criteria (Skyhawk)

A stabilized approach is desirable, and is described in the *Airplane Flying Handbook*, Chapter 8. Airlines rightly have specific rules defining "stabilized," with emphasis on establishing the stabilized approach quite early, and far from the runway.

Given the speeds at which we operate, the availability of the instant go-around power of a reciprocating engine, and the simplicity and lightness of our aircraft, we can reduce our "stabilized" criteria quite a bit from that used by heavy and jet operators. However, the concept is still valid, and will be taught to students. The goals here are to 1) avoid major reconfiguration at very low altitude, and 2) avoid excessive speed which may result in touchdowns beyond the touchdown zone. The Tech standard for stable approaches is as follows:

1. Instrument approaches. ILS/LPV approaches (beginning at glideslope intercept) will be flown at 80 KIAS maximum with 10° flaps. For consistency, non-precision approaches (beginning at the final approach fix) will also be flown at 80 KIAS with 10° flaps. Upon breaking out of the real or simulated weather at MDA/DA, the pilot flying will establish the final configuration. After verifying the aircraft speed is within the white arc, the pilot will lower flaps to 20° and continue at 65-70 KIAS, with the intention of landing with 20° flaps. 30° flaps is optional for non-precision approaches to short runways.
   a. In either of the cases above, failure to achieve 80 KIAS and a normal glidepath by one-half SM from the approach end of the runway and 200' AGL will result in a go-around.
2. For typical VFR patterns, the final configuration will be achieved, checklists completed, and the airplane on speed (for the flap setting used) not later than 100' AGL.
   a. If these items cannot be achieved, a go-around will be accomplished.
   b. Pilots will not "dump" full flaps at low altitude in efforts to make a spot landing.

Missed Approach

Instrument students will brief their instructor as to the DA/MAP for a particular approach. Upon reaching that point, the student will so state. The instructor will either say nothing, or will clearly state "runway in sight." Silence in response to the student's DA/MAP call indicates to the student the need to initiate missed approach procedures. "Runway in sight" indicates to the student the need to immediately doff the view-limiting device and continue the approach with the intention of landing the aircraft. The "runway in sight" call will be made in a timely fashion, to preclude any confusion on the part of the pilot flying. Instructors will thoroughly brief touch and go procedures, if applicable.

Trainees will brief the missed approach procedure or climbout instructions. In the event that missed approach training is to be accomplished, instructors will ensure compliance with ATC-assigned climbout instructions, if issued. Instructors are reminded that climbout instructions supersede published missed approach procedures. However, climbout instructions are assumed to begin at the departure end of the runway; the student will require guidance from the instructor as to when to turn out. Note that if flying in marginal weather, the possibility exists that the departure end may not be visible. In this event, if climbout instructions were issued, pilots will initiate the published missed approach procedure and immediately advise ATC.

Trainees executing climbout instructions are <u>not</u> "going missed approach" and will <u>not</u> so state to ATC. The proper call is "Cessna 123LT executing climbout instructions."

When accomplishing AATD/FTD instrument training, instructors are encouraged to have the student fly the published missed approach procedure.

NEW INSTRUCTOR CONTINUATION TRAINING

1. Louisiana Tech University flight instructors should accomplish the following additional training, under supervision, within 90 days after their initial proficiency checks.
    a. Typical Private pilot training flight to include airwork and three landings.
    b. Typical Commercial pilot training flight to include airwork and three landings, to be accomplished in a retractable gear airplane.
    c. If an instructor is Instrument rated after initial hire, the instructor will accomplish (again, within 90 days) an Instrument profile in the Frasca Mentor, to include unusual attitudes and two approaches.
2. The purpose of these continuation sorties is new CFI proficiency and review of common student errors. There is no minimum duration for these sorties.
3. It is preferred to accomplish these sorties with the Chief Instructor or Assistant Chief. With specific Chief Instructor permission; check pilots may volunteer to be utilized in the supervisor role.
4. In conjunction with this, that same supervisor/check instructor should be scheduled for a stage check with a student of the new instructor. Subsequent to this, the check instructor will debrief the new CFI on their student's performance.
5. Document this training on manual gradesheets, and provide the gradesheet to the Chief Instructor for inclusion in the CFI's folder.

CFII Candidate Training

Louisiana Tech University flight instructors are strongly encouraged to add the Instrument Rating (CFII) to their instructor certificates. In the past, the process of training CFIIs was less uniform than desired. To standardize CFII training, CFII candidates and their instructors will use the Louisiana Tech University CFII syllabus. This syllabus is used only for personnel who already hold an FAA Flight Instructor-Airplane Single Engine certificate. (Louisiana Tech University does not do the CFII as the initial flight instructor training.)

There is no minimum experience for CFIIs to conduct this training, but instructors require Chief Instructor approval.

CFII Upgrade Flight Fee Waiver

Tech instructors engaged in their Certificated Flight Instructor, Instrument (CFII) upgrades are authorized waiver of device and aircraft rental fees as follows:
1. The fee waiver policy applies only to flight instructors who:
    a. are presently employed by Louisiana Tech University, are not grounded for any reason, and have performed not less than 10 revenue hours for the Tech flight program in the calendar month preceding the flight(s); and
    b. are either Louisiana Tech alumni, or are presently enrolled as Tech students, and
    c. have the Flight Instructor Instrument Airplane knowledge test report (with a passing score) in hand; and
    d. commit to the performance of not less than three months of Tech instructor service subsequent to the addition of the CFII rating; and
    e. secure approval from the Chief Flight Instructor.

2. Only the following Admin flights are free of charge and covered by this policy:
   a. a single confirmation flight ("recommend ride"), not to exceed 1.8 hours Hobbs time, immediately prior to endorsement for the CFII practical test;
      i. If the confirmation flight does not result in endorsement, any further aircraft training deemed to be required will be charged to the trainee at applicable dual (Refresher) rates.
   b. a cross-country flight (if required) to and from the location where the practical test will be conducted, not to exceed 200 nautical miles (NM) from Ruston Regional Airport; and
   c. the practical test sortie itself.
      i. If the initial practical test results in a disapproval, all subsequent flights for remediation and retesting will be charged to the trainee at applicable rates.
3. The flight fee waiver policy is not retroactive to any past employees, nor to any present instructor staff who have already attained the CFII.
4. Additional details:
   a. Flights associated with this policy require the Chief Instructor's approval.
   b. CFII applicants must pay their own DPE and knowledge testing fees.
   c. Instructors conducting CFII training require Chief Instructor approval prior to beginning.
   d. CFII applicants pay normal Oral rates to their instructors during all ground training, device, and flight time. Instructors will schedule this Oral in Talon after the fact at any convenient time slot, and log it on a separate tach sheet. This step is necessary due to the flight and device training being logged with "I-P" in the tach sheet's Syllabus Training Period Number blocks. "I-P" sorties are not revenue-producing; they do not go into the payroll. Putting Oral charges on an "I-P" tach sheet will result in the instructor not getting paid for the flight/device time.

SKYHAWK MIXTURE LEANING

Louisiana Tech University Flight pilots operating Skyhawks will comply with the below information from Cessna. 75% horsepower means less than 2,450 RPM at any temperature.

Fuel Saving Procedure Listed for Training, Regular Ops ATA: 28-00 Models: 172, 182, 206 Published: 08-16-2010:

Operators of Model 172R/S, 182T/T182T, and 206H/T206H aircraft will benefit from the following procedure for fuel savings during flight training and normal operations. This procedure also is in Section 4, Amplified Normal Procedures of the applicable Pilot's Operating Handbook (POH).

1. After engine start and for all ground operations, set the throttle to 1200 RPM and lean the mixture for maximum RPM. After leaning, set the throttle to the appropriate RPM for ground operations. Leave the mixture at this setting until the beginning of the BEFORE TAKEOFF checklist. After the BEFORE TAKEOFF checklist is complete, if delay is anticipated, lean the mixture again as described above until ready to perform the TAKEOFF checklist.
2. Lean the mixture for maximum RPM during full throttle climbs above 3000 feet. The mixture may remain leaned (maximum RPM at full throttle) for practicing maneuvers such as stalls and slow flight.

3. Lean the mixture for maximum RPM during all operations at any altitude, including those below 3000 feet, when using 75% or less power.

LOCALLY REQUIRED WRITTEN TESTS

Pre-solo
The pre-solo written test is conducted in accordance 14 CFR 61.87(b). It is to be accomplished by the student, alone, open-book, at Flight Operations, with subsequent debrief and correction by the CFI.

SOP Test
All students new to Tech take the SOP as detailed above. Students entering the Commercial course take a more advanced SOP test. CFIs will place the original of these documents in the student's training folder; a photocopy is <u>not</u> acceptable. Flight instructors who are not Tech Professional Aviation graduates will also complete both these tests in conjunction with their initial proficiency check.

C-172 Information Manual Review
All Louisiana Tech University pilot students, to include rated pilots transferring in, will accomplish an Information Manual Review worksheet, prior to operating Louisiana Tech University aircraft. This one-time requirement is reflected in Talon/ETA as a Qualification, which will not be overridden when Activity Authorizing training events. Personnel beginning the Instrument course who obtained the Private Pilot certificate here at Tech have already met this requirement; the worksheet need not be re-accomplished.

ADDITIONAL GUIDANCE ON PRACTICAL TESTS: IACRA, FAA FORM 8710 PROCEDURES, AND SCHEDULING IN TALON/ETA

Unless advised otherwise by a specific DPE, all Tech flight course graduates applying for an FAA certificate or rating will complete IACRA, vice a paper Form 8710. The School Administrator's IACRA actions (school affiliation and course association), plus the student's Part 141 graduation certificate are what make Tech students "legal" for a practical test with reduced hours (less than Part 61 aeronautical experience requirements). Three copies of the graduation certificate are printed: one for the student's training folder (certifying course completion), one for the DPE, and one for the student to keep.

Tech does not possess pilot examining authority at this time. Thus, Air Agency endorsement on the back of FAA Form 8710, Airman Certificate and/or Rating Application is neither required nor appropriate prior to a practical test (as it would be if our Final Stage Check served in lieu of a practical test, which is what "examining authority" means). For certificate and rating applicants using IACRA, this means that, if a DPE/practical is required prior to certificate issuance, the Chief Instructor does <u>not</u> certify course completion in the Air Agency's Recommendation block (on the back) of FAA Form 8710, nor in IACRA.

However, applicants who graduate a Part 141 course, <u>will</u> check block II(C) "Graduate of Approved Course" in the "Certificate or Rating Applied For on Basis of:" block of Form 8710 (on the front).

IACRA does not (always) tie to the FAA's Airman's Registry. This means that first-time IACRA users (regardless of pilot certificates held) may not be "in" IACRA, when they attempt to create their 8710. If this is the case, the applicant must answer "no" to the question of "Do you currently hold a pilot certificate?" and then continue inputting their personal information.

Following the applicant's creation of the application, the School Administrator must "affiliate" the applicant with the school. Subsequently, the School Administrator must "associate" the applicant with a particular curriculum (Private, Instrument, or Commercial). The applicant may be required to bring his logbook to the School Administrator. Subsequent to that, the CFI will be the Recommending Instructor on the back of Form 8710 for those students completing their training under 14 CFR 141. Only the Chief Instructor is presently has the School Administrator role in IACRA.

Trainees do not deal with IACRA every day. Thus, CFIs must supervise the 8710/IACRA process, report the requirement for a graduation certificate in a timely fashion, and coordinate with the Chief/Assistant Chief Instructor for Talon/ETA course completion procedures.

Talon/ETA Practical Test Scheduling Guidance
Notwithstanding weather, whether or not the recommending CFI accompanies the student on his practical test is at the discretion of the student. Students may find that having their CFI with them is beneficial.

Using a Rental or Refresher for a Practical Test
The latest revisions of the TCOs (in Talon/ETA) allow for the practical test to happen on a "Course" Unit. Students in older TCO versions will require a Rental or Refresher, as appropriate. Procedure:
1. In Talon, go to New Request.
2. If the CFI will accompany the student to the location of the practical test, then the type of flight is Refresher, the PIC is the CFI, and the sortie is charged at the dual rate.
3. If the student will fly solo to the location of the practical test, or accomplish it locally, then the type of flight is Rental, and the sortie is charged at the solo rate.
4. CFIs must not schedule a Rental with themselves as PIC; Talon/ETA will read this as the CFI being charged for the flight times.

Talon "RMS Sheet"
Students proceeding to their practical tests are typically provided a Resource Event Status report from Talon/RMS. The proper use of this report is to verify the times and dates listed on it with the actual airplane maintenance logs. During this process, students will annotate the Talon report with the dates accomplished of those items that appear on the report with only flight hour figures, such as certain Airworthiness Directives, 100-hour inspections, and engine and propeller overhauls.
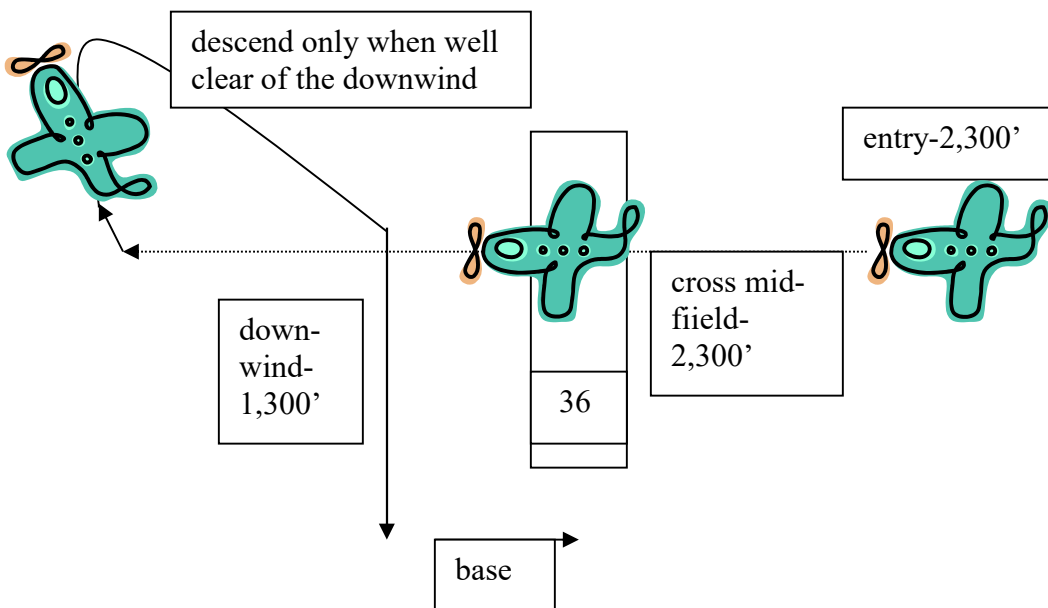
VFR PATTERN OPERATIONS AND ENTRY

Often, pilots have a requirement to enter the VFR traffic pattern from "the wrong side," i.e. the side opposite the normal downwind. If the pattern is occupied, Louisiana Tech University pilots will use one of the following procedures.

1. Enter an upwind leg parallel to the runway at pattern altitude. Then proceed to turn left crosswind and left downwind at pattern altitude. This provides vertical spacing from any takeoff traffic, and provides a nice opportunity to clear downwind. Use extreme caution for any traffic executing a go-around. <u>Do not space yourself such that traffic going around can climb into you.</u> Example:

| crosswind-1,300' | | up-wind-1,300' | | entry-1,300' |

down-wind-1,300'

36

base
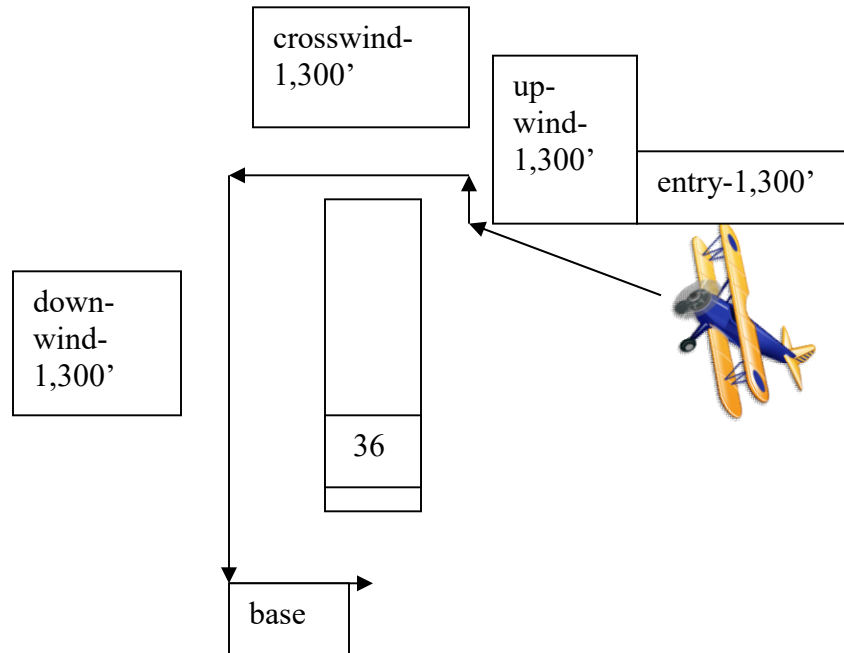
2. Alternatively, pilots may cross mid-field at 2,300 feet (1,000' clear of prop traffic and 500' clear of jet traffic), and perform a descending teardrop turn of 225° to enter a left downwind from a 45° angle. <u>This procedure requires the pilot to not descend until beyond the normal downwind track.</u> Example:

descend only when well clear of the downwind

entry-2,300'

down-wind-1,300'

cross mid-fiield-2,300'

36

base

Both entries have their place. The upwind entry is simpler and should be used to fit in behind traffic on downwind. The mid-field crossing may be effective if needed to lose altitude, or if traffic exists on take-off leg or crosswind. Pilots should note that, in any case, aircraft entering the pattern should yield to aircraft established in the pattern. This could mean executing a 360° turn.

If approaching the airport from the side opposite normal traffic, and the pattern is totally empty, pilots may cross the runway at a suitable point at pattern altitude, and simply turn downwind.

VFR Pattern, General
Tech crews requiring multiple VFR patterns and landings are encouraged to utilize the Union Parish (F87) and Jonesboro (F88) airports.

Due to their less than optimum layouts, Arcadia (5F0) and Homer (5F4) are restricted to crews that include a flight instructor. Landing at Arcadia and Homer will not be tested on stage checks.

Tech crews are reminded to be flexible and cordial when dealing with transient traffic at Ruston Regional; they may not be cognizant of just how busy "our" pattern can get at times.

Tech crews are also reminded that the generally accepted definition of "well clear" is 500'. Be aware that 500' can look pretty close, and _may_ be too close, depending on closure rate and angle. The idea, in clearing, is to be conservative, but do not overact to traffic in proximity to your aircraft.

Instrument Holding and Approaches vs. VFR Pattern Ops
Tech crews accomplishing instrument approaches should generally self-announce their positions with reference to miles from KRSN, not named IFR fixes.

Louisiana Tech University pilots operating Louisiana Tech University aircraft are prohibited from practicing holding (multiple turns) below 3,000' MSL at the Ruston (ROQ) NDB and other local IAP fixes. This prohibition in no way affects routine instrument approaches from being conducted utilizing published altitudes, either VFR or IFR. Crews accomplishing instrument procedures during busy VFR pattern times are reminded to clear vigilantly with both their eyes and their ears. Such crews are also reminded that, even under IFR, they do not have priority over VFR pattern traffic, and that they should plan and coordinate their arrival so as preclude conflicts.

INSTRUMENT APPROACHES BY LOUISIANA TECH UNIVERSITY AIRCRAFT AT RUSTON REGIONAL AIRPORT

Some risk of mid-air collision must be accepted when aircrews do instrument approaches whilst VFR traffic pattern operations are in progress at Ruston Regional. Of particular interest are "opposite direction" instrument approaches.

The ability to fly circling instrument approaches is critical to pilot skill, and is frequently a weak area in training and checking. Tech Instrument students and their instructors have routine requirements to conduct GPS instrument approaches to Ruston that culminate in circling to the landing runway. In order to a) land into the wind, and b) mesh with existing VFR traffic, such instrument approaches must necessarily be flown in the direction opposing the normal traffic

pattern. (The VOR/DME-A circling-only approach will be addressed separately.) Such approaches, as well as straight-in visual approaches to the active, which are also a routine training need, can easily be worked into a VFR traffic pattern, provided suitable precautions are taken, as follows.

1. Opposite direction instrument approaches will only be conducted in VMC.
2. Instrument crews must realize that the fact of their flying an instrument approach, whether VFR or on an IFR clearance, and whether with or against the prevailing traffic direction, does <u>not</u> give them any particular priority, or right of way.
   a. However, by the same token, VFR crews, instructors and students alike, are reminded that they either did, in the past, or will, in the future, have some need to fly a certain instrument approach in order for a particular instrument training profile to "work out." In other words, VFR crews should have forbearance and sympathy for other crews flying instrument approaches.
3. For <u>any</u> instrument approach into KRSN, whether flown under IFR or VFR, crews will begin monitoring CTAF not less than 12 NM out.
   a. Crews flying instrument approaches into KRSN (in either direction) will report their positions on CTAF at 12, 5, and 2 NM. These reports should be made in terms of <u>miles</u>, as opposed to reporting position with reference to an instrument fix (AYONE, NOSAW, etc.) Additionally, if applicable, crews will, upon commencing the circling approach, report "low left downwind," to assist other pilots in knowing where to spot them.
4. Since the initial segments and holding patterns of the local instrument approaches lie <u>within</u> the local practice areas, CFIIs must also be actively visually clearing throughout the maneuver.
5. On opposite direction final approaches, crews observing aircraft on takeoff leg / upwind must realize that those pilots likely cannot see forward very well, owing to their aircraft's pitch angle. Yield accordingly.
6. Aircrews accomplishing the VOR/DME-A approach from the east will also make the position reports listed above. CFIIs will not tolerate a late descent to MDA if flying this approach when Runway 18 is the active. If landing 18, they may report a "2-mile left base." If that will conflict with existing traffic, then they should maneuver to join a left downwind in sequence. If landing 36 during an active VFR pattern, they should join the left traffic flow, by crossing the runway at a suitable point.

In general, common sense and courtesy should prevail. One crew may need to extend VFR downwind to help another get a straight-in. An Instrument student may have to make a 360° turn (at a safe altitude) on final to make the spacing work out. The SOP cannot cover all the possible variations that could occur. Whatever it takes, Tech crews will assist each other.

As previously noted, 500' is considered "well clear." Tech pilots are to be always vigilant, but they should not overreact to the occasional conflicts that are inevitable in non-towered airport operations.

CFIIs are reminded that mid-air collisions <u>have</u> happened when instructors focused overly much inside their cockpits, on what their hooded students were doing.

Tech aircrews must especially listen up on CTAF when transient aircraft are arriving and departing. Pay close attention to callsigns and aircraft types. CFIs will teach students where to

look, and to know that not all aircraft operate at our speeds and pattern spacing. The crews of transient aircraft may have no idea nor care of the Ruston traffic situation.

FLIGHT FOLLOWING FOR VFR CROSS-COUNTRY FLIGHTS

Louisiana Tech University aircrews operating cross-country sorties under VFR must have their flight followed in one of two ways. Flight following in this context means that someone official knows when an aircraft departs and when it arrives (or fails to do so). ATC VFR radar flight following with traffic advisories, while encouraged, is not one of the two ways.

Situation 1—"Normal ops."
School is in session and Flight Operations is manned by a dispatcher. If a standard dispatch release with cross-country destination and intermediate stop information is filed with dispatch as required, and if dispatch will still be on duty when the flight returns to Ruston, then an FAA VFR flight plan is not required.

Situation 2—"Non-standard." An aircrew is operating a cross-country (either the departure or arrival portion) outside of normal dispatch hours, or on Sunday, or while the University is on break. The crew must file (and open and close) an official FAA VFR flight plan, to ensure search and rescue coverage. (Note that the physical presence of the Chief Instructor, assistant chief, or administrative coordinator does not constitute dispatching/flight following for cross-countries.)

Aircrews are reminded that FAA VFR flight plans are not ATC clearances, and do not enter the system as IFR flight plans do. They must be filed, activated, and closed with Flight Service.

Aircrews must note that failure to close a VFR flight plan will result in unwarranted activation of search and rescue, which is a very serious matter. In order to preclude this, pilots will provide the FSS specialist their personal telephone number, not the Flight Ops phone number, when filing the flight plan. This is the number FSS will call first, when a flight plan is not closed in a timely fashion (which is bound to happen). (Filing Flight Ops number will defeat the entire purpose of the exercise; you're filing the flight plan because Flight Ops is not manned.)

For local training sorties, Talon ETA's Ramp-in and Ramp-out functions serve to notify the Chief Instructor of crews' whereabouts. These must be accomplished by the CFI in a timely fashion when CFIs self-dispatch.

CFIs who self-dispatch are reminded that they are directly responsible for building security. If you are flying on Sunday, you must lock Flight Operations prior to stepping to fly.

Aircrews that will remain overnight (RON) away from Ruston will notify the dispatcher of their landing time. They will also notify dispatch of their departure the following day. If there is or will be no dispatcher on duty, these crews will follow non-standard procedures as noted above.

Additional Flight Following Information
Louisiana Tech University dispatchers routinely close Flight Operations earlier than the published operating hours. This is approved as long as no solo pilots are airborne, and no solo sorties are scheduled. ("Solo" in this context means "crews lacking a flight instructor.")

Notwithstanding the above, events may arise in which we need knowledge of the whereabouts of dual crews. Prior to closing Flight Operations with crews remaining out (whether closing early or on schedule), the dispatcher will note the estimated time of return (ETR) on the flight release and in Talon/ETA of each cross-country dual crew. If the ETR has been exceeded, the dispatcher will 1) attempt direct contact via cell phone with the instructor, 2) attempt to check the flight's progress via computer (FlightAware, etc), 3) contact the FBO at the crew's cross-country stopover point, and then 4) contact Flight Service. If the crew is located by any of these means, the dispatcher will update the flight release with the amended ETR, and may then proceed with closing Flight Ops.

Crews who will exceed the ETR (on their flight release or in Talon/ETA) will contact the dispatcher as soon as they realize this fact. This should preclude the dispatcher being required to start the process listed above.

SECURING TECH AIRPLANES

When securing an airplane with ropes, Louisiana Tech University airplanes are to be tied down using two half-hitch knots. How to make such knots is detailed in the figure on the following page (courtesy of AOPA).

Tying two half-hitches

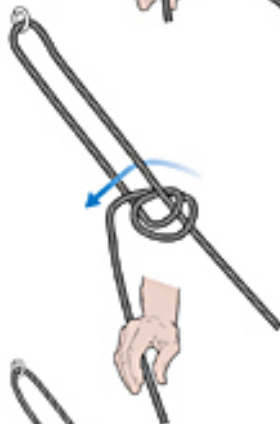**1** Run rope through the tiedown eyelet from the back of the airplane to the front.

2 Circle the line around and through to form the first of two half-hitches, six to 12 inches from the airplane's tiedown eyelet.
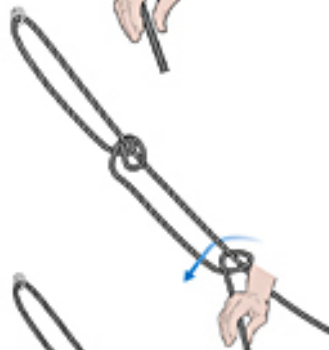
3 Repeat to form a second half-hitch, pulling the line around and over the first, then locking it under the first with a sharp tug.
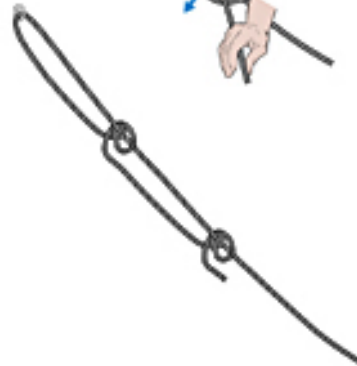
4 Now form a second set of half-hitches, six to 12 inches below the first set, by repeating steps 2 and 3.

5 The two sets of half-hitches are complete. For best results, use proper line and solid ground attachment points.

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USE OF A SET HEADING POINT TO BEGIN DEAD RECKONING NAVIGATION

Dead reckoning navigation timing should NOT begin at aircraft rotation. The top of climb (TOC) point should NOT be used as a point to which the pilot is attempting to navigate. This is due to the lack of precision and predictability in time and distance to actually reach the TOC, when compared to the time and distance planned. A takeoff in the direction opposite the planned flight, turns during departure, or radar vectors could result in reaching the TOC at a point different from that planned. This may result in pilot confusion. At best, it would result in an unnecessary adjustment. Even if the airplane is taken off in the direction of navigation and flown straight out the desired course in no-wind conditions at precisely book speeds, the TOC fix can still end up being over a point devoid of landmarks.

The solution is to create a second fix after the TOC at which dead reckoning navigation will actually start. This fix is known as the Set Heading Point (SHP). The SHP is a prominent landmark within the vicinity of the departure airport that will provide easy recognition from the air (pilotage). (The SHP could also be a NAVAID; however trainees are generally expected to use visual checkpoints when learning dead reckoning.) The SHP is the point where the aircraft is to be turned to the planned heading for the first leg—the leg that will take the aircraft either to destination, or to the first turning point (if applicable). Passage over the SHP is also the point at which the pilot begins a groundspeed check. Based on the time that is required to travel from the SHP to the first checkpoint, the pilot determines the aircraft's actual groundspeed and then predicts with accuracy the estimated time of arrival at the destination. The SHP should be readily visible (unless a NAVAID is used), but away from the departure airport and its traffic pattern. It should also be a sufficient distance from the departure airport so that the aircraft will have achieved cruising altitude and airspeed by the time the SHP is reached.

For planning purposes, the pilot plots the TOC point on a straight line drawn from the departure airport to the SHP, which should be roughly five miles beyond the TOC distance (as published in the AFM/POH) on this line. After takeoff, the pilot should turn to the planned heading as soon as feasible, but precision in navigating to the TOC point is not required, since the SHP should be visible as long as the pilot heads in the correct general direction. Account for the estimated time and fuel for this short segment by showing it on a line on the navigation log. On the nav log, the first three lines should read:
> - Departure airport to TOC: time and fuel from AFM/POH
> - TOC to SHP: time three minutes and fuel 0.4 gallons (for example)
> - SHP to first navigation checkpoint: applicable cruise time and fuel

See Figures 1 and 2. (The TOC point is referred to as "Level Point" in Figure 1.)

Pilots desiring a more detailed explanation may review the source document at:
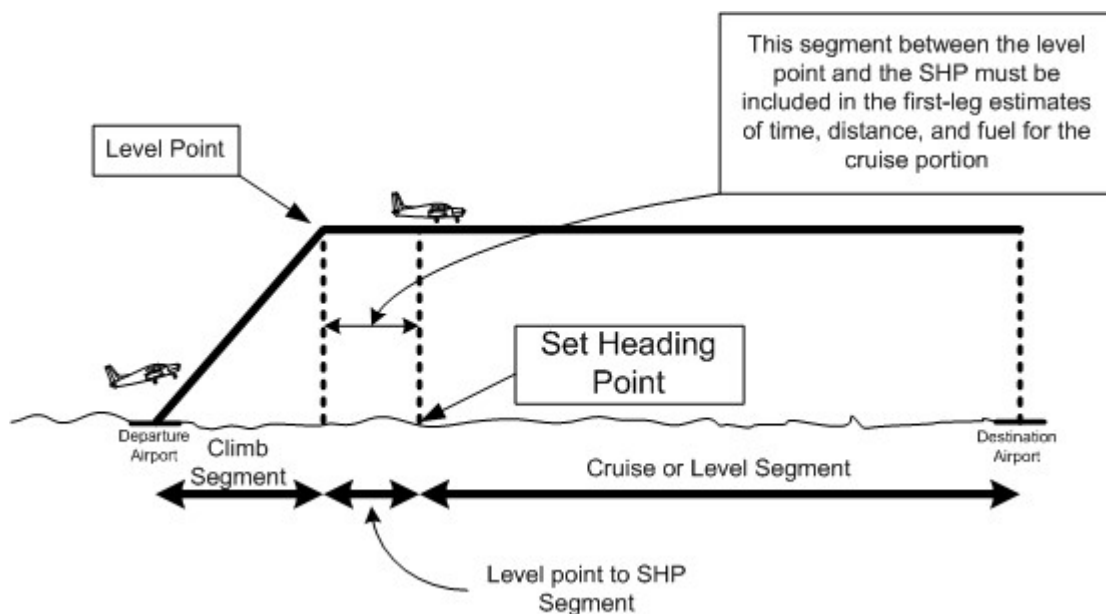http://www.langleyflyingschool.com/Pages/Cross-Country%20Navigation%20Preparation.html
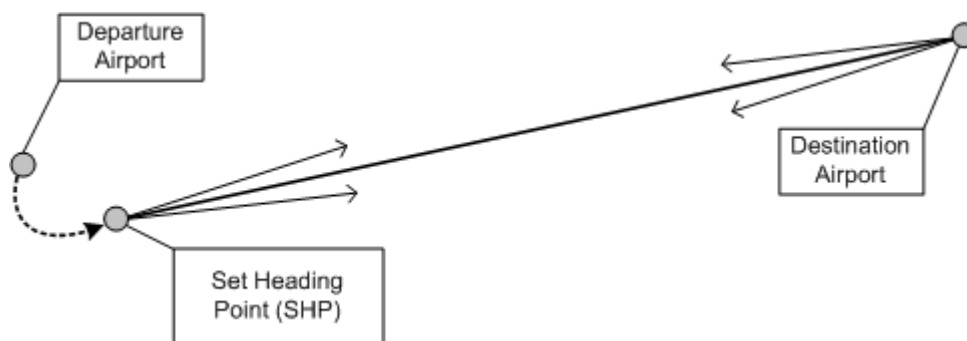
Figure 1

Figure 2

STANDARD VFR PATTERN RADIO CALLS

The following are the desired radio calls when operating VFR at Ruston Regional. Most of these calls will work at most non-towered airports.

1. Radio check with the dispatcher or the FBO, if available.
2. Initial taxi to the active runway.
3. Departure. Add "closed traffic" if you intend to remain in the traffic pattern after initial takeoff.
4. Established in the practice area, if applicable.
5. 12 (if applicable) and five miles out, with cardinal direction, during arrival.
6. Downwind.
7. Base.
8. Final. Add "full stop," if applicable.
9. Clear of the active runway.

Reporting crosswind is optional, and <u>may</u> be appropriate.

Reporting departing the pattern, with cardinal direction is optional, and <u>may</u> be appropriate.

Reporting "call sign, going around" during a go-around, balked landing, or missed approach is <u>not</u> required or desired, <u>unless</u> it is relevant to others in the pattern.

Reporting departure leg is <u>not</u> required or desired, <u>except</u> if a conflict is believed to exist.

Reporting 45-to-downwind during arrival is <u>not</u> required or desired, <u>except</u> if a conflict is believed to exist.

Reporting "on the go" during routine touch-and-goes is <u>not</u> required or desired. CFIs who were taught, as students, to make this call will stop making it and will stop their students from making it.

Including the word "turning" in the crosswind, downwind, base, and final reports is <u>usually not</u> required or desired.

FBO COURTESY CARS

Aircrews are reminded that FBO courtesy cars are intended for very short-term use, and are intended for FBO customers (i.e. fuel purchasers).

FAR/AIM UPDATES

Professional pilots do their best to keep current publications. Part of this is maintaining a current copy of the FAR/AIM. Unfortunately, the commercially available (paper) FAR/AIM book may be assumed to be non-current on the day you buy it. Visit www.asa2fly.com for regulation and AIM changes released after the printing date.

CESSMA 172S SKYHAWK GUIDANCE

G1000 Instructor Training
Instructors require training on the Garmin Integrated Flight Deck (G1000) prior to operating the system with students. If the instructor obtained Commercial or Instrument training here at Tech, this requirement has already been met.

CFIs who've not had formal training (Instrument or Commercial course) in a G1000 cockpit will manually fill out a copy of the Garmin Integrated Flight Deck Pilot's Training Guide, and present it to the Chief Instructor or his assistant. This is considered an open-book test, which will be corrected to 100%. The copy of the pamphlet that will be provided has references to assist in finding the answers. Most of the answers are found in the G1000 Pilot's Guide, a .PDF copy of which can be found on each desktop computer in Tech Flight Operations.

New instructors also require operator training in the AATDs. Depending on recency of experience, this requirement may include a currency flight in the device and/or instruction as to serving as the sim operator.

Each instructor will, prior to conducting operations with a student, pass a proficiency check in the G1000 aircraft with a check instructor or higher.

G1000 Skyhawk—General

Food and drink are not authorized in the G1000 aircraft; bottled water only. Pilots will treat Tech aircraft as they would their own personal valuable property.

The fuel strainer for the G1000 aircraft is part of the aircraft's equipment, and will not be removed from the aircraft.

The *GARMIN G1000 NXi Cockpit Reference Guide* is part of the aircraft's required equipment, and will not be removed from the aircraft. Louisiana Tech University pilots are prohibited from placing water bottles (or any other wet item) in the pilot's left side wall pocket of the G1000 Skyhawks. This pocket is the normal location for the *G1000 NXi Cockpit Reference Guide*. Although the *Guide* is printed on fairly tough plastic pages, the printing on those pages is not waterproof.

Tech pilots will strive to use the correct Cessna/Garmin terminology when referring to G1000 system components.

Tech pilots will refrain from changing system settings within the G1000 system. We prefer to keep things standardized. Do not change the MFD to "north up" view.

(Although it is not G1000-related,) each G1000 Skyhawk has installed in it a simple angle of attack warning system, directly to the left of the magnetic compass. Other than intentional slow flight or stalls, or perhaps chandelles, the lights of this system should only ever show green. The device "growls" when the airplane achieves an excessive angle of attack. It makes this sound during its start-up self-test also; this is not a malfunction.

The pilots' seatbelts contain airbags. Pilots will ensure that the seam of the pouch containing the airbag faces front when in use. Fastening the seat belt's buckle arms the air bag. Pilots will not fasten the seat belts after flight.

In the G1000 system, the "tach time," since its display is electronic, must be recorded prior to turning off the PFD/MFD.

It is imperative that pilots turn off the standby battery prior to leaving the aircraft.

Pilots will avoid touching the PFD and MFD screens with their fingers. Garmin cautions that the oils in human skin are damaging to the coatings of the screens. Touching the screens is uncalled for anyway; they're not touch screens. Pilots desiring to clean the PFD or MFD will use only the provided Ativa screen cleaning wipes.

G1000 Training Guide

Prior to solo use of the G1000 aircraft, all students will complete the applicable worksheet, and review it with their instructors. Instructors will annotate their students' training folders appropriately, indicating completion. The GIFD PC-based simulator and a .PDF of the GIFD Pilot's Guide are available on all the computers at Tech Flight Ops.

G1000 Failure Simulations

"Approach with Loss of Primary Flight Instrument Indicators" remains a Task in the Instrument Rating ACS. To practice this, portions of the G1000 system must be turned off. CFIs will do so using the following guidance, consolidated from the *G1000 Guide for Designated Pilot Examiners and Certified Flight Instructors*.

Cessna does not recommend opening circuit breakers (CBs) to simulate failures. This is because a CB is not a switch, and is not intended to be opened and closed repeatedly. Therefore, Tech CFIs will not open CBs to simulate failures.

Failures will be simulated by manually dimming the PFD and/or MFD. Use the procedures found. The following three scenarios will be trained:

1. Loss of ADC <u>and</u> AHRS. Dim the PFD; use backup flight instruments. GPS, MFD, and moving map remain available. Fly the instrument approach using backup instruments and moving map. Autopilot is not available. DPEs will almost certainly test this.
2. Loss of PFD <u>or</u> MFD. Use reversionary mode (red button) and completely dim one or the other display. Approaches can be flown in this configuration without the moving map. DPEs may or may not test this.
3. Recovery from Unusual Attitudes. Loss of the PFD <u>and</u> MFD cannot be simulated in the aircraft without pulling CBs or manually dimming both screens. This scenario represents a severe emergency—loss of all electricity due to multiple failures, or perhaps, fire. It should practiced only in the AATD, with the student demonstrating only climbs, descents, compass turns, and (especially) unusual attitude recoveries. In the aircraft, practice unusual attitude recoveries with and without the PFD. DPEs may test in either configuration.
4. WAAS failure and GPS LOI. Indications and practice of these are discussed in the *Techniques* manual.

For approaches, CFIs will document in Talon/ETA which malfunction was practiced on the "Approach with loss of primary instruments" item.

Care of the G1000 Fleet

It benefits all Tech pilots for our aircraft to look as good as they can, for as long as that is possible. Please use care around the airplanes, being conscious of and avoiding the following damaging pilot actions:

1. Hanging your arm out the window while taxiing.
2. Setting hard objects on the cowling.
3. Setting any object, aside from the aircraft's key, atop the instrument panel.
4. Missing the keyhole with the key, and scratching the paint or the vinyl graphics.
5. Damaging the interior with your feet during entry and/or exit of the airplane.
6. Spilling AvGas on the top of the wing when returning your fuel sample to the tank.
7. Kicking the fuselage with your foot when stepping up to visually inspect the fuel level.
8. Touching the PFD/MFD screens with your finger(s).
9. Operating the manual pitch trim while the autopilot is engaged.
10. Failing to release the parking brake after tie down.
11. Failing to turn the STBY BATT switch off at engine shutdown.

Skyhawk Seats

Our Skyhawks are equipped with reclining pilot seats, which are known to be fragile. Louisiana Tech pilots will observe the following precautions. When adjusting the pilot seats, Tech pilots will avoid abrupt motions in both the fore/aft and recline directions. The seat stops will never be hit with any force when sliding or reclining the seats. If a pilot seat is resistant to motion, report it on a maintenance discrepancy form. Rear seat passengers will enter and exit the rear passenger compartment entirely without touching either pilot seat. Most especially, do not pull on the top or upper edges of either pilot seat. If needed, front seat pilots will assist passengers exiting the rear by physically offering them a hand.

Skyhawk Cabin Air Control Knobs

Louisiana Tech pilots will not attempt to force the knob CABIN AIR push-pull knob beyond its limit of travel (which is only about one inch). This can damage the control cable, or its stay, behind the instrument panel. If the knob is difficult to move, it is probably already broken or damaged. Do not attempt further use of it; write it up on a maintenance discrepancy form.

Skyhawk Throttle Idle Stop

Louisiana Tech pilots will not apply heavy aft force when moving the throttle control to the idle position. Such action can damage the nylon/plastic idle stop bushing on the fuel servo unit.

Skyhawk Doors

Louisiana Tech pilots will refrain from slamming the aircraft's doors.

PIPER PA-28R-201 ARROW GUIDANCE

Aircraft, General

Our complex airplanes are a fragile, limited resource—a resource that each student requires at the most critical time (the end of the program). Any time these aircraft spend (unnecessarily) out of service is bad. We must care for them accordingly.

Prior to the first dual ride in the Arrow, each Commercial student will receive, as part of Stage 3, Lesson 2, Unit 1, a detailed review of the Arrow-related guidance in this sub-section, the sub-section in Section 1 above entitled OPERATIONS IN RETRACTABLE LANDING GEAR AIRCRAFT, and the subsection in Section 5 above entitled PROCEDURE IF A SINGLE LANDING GEAR FAILS TO INDICATE SAFE ON THE PA-28R. Flight instructor applicants will lead their instructors through a similar review during their study of "Operation of Systems."

The Arrow, despite the -201 suffix, is not a high performance airplane as defined by 14 CFR 61.31(f). Its rated horsepower is exactly 200, not "more than."

Pilots will generally refrain from removing the AFM/POH from the aircraft. Students will purchase or otherwise obtain an electronic or paper copy of the Information Manual, Piper p/n 761-869.

The cockpit has virtually zero storage locations for pilot personal items. Plan accordingly, as far as cockpit organization.

The airplane's airworthiness certificate is conveniently located in a clear plastic forward-facing pocket behind the pilot's seat. The registration is kept in the AFM/POH. Both certificates are

encased in plastic, but not laminated. The certificates will not be removed from these locations unless directed by competent authority.

Be alert to (and report/squawk) any damage to the plastic flap lever shield.

Use caution with the wall-mounted air vents located by each pilot's outer foot. The vent on the copilot's side is quite vulnerable to breakage.

Tech pilots operating the PA-28R Arrow <u>will</u> secure the tackle box using the aircraft's installed cargo straps; this is not optional, and is in accordance with this manual's PREFLIGHT INSPECTION PROCEDURES section.

Tech pilots conducting manual towing of the PA-28R Arrow are prohibited from both pulling and pushing on the propeller. If assistance is necessary in the forward direction, a second person may help by pushing on the cockpit entry grab handle or the cockpit entry step. When pushing back into parking, the assistant will push on the leading edge of the wing (only).

Pilots will refrain from setting any objects whatsoever atop the wings of the airplanes, and will refrain from handing tools, such as the tow bar, over the top of the wing.

The fuel selector has no BOTH position.

The aircraft have after-market straps for securing the flight controls. Their use should be self-explanatory.

The pitot mast covers are not used, as their design does not allow them to remain installed when the wind is blowing. Pilots will closely check for obstructions in the openings in the pitot masts, prior to flight.

When not in use, the fuel check cup is stored in the rear pocket of the right rear seat—not in the tackle box.

The stabilator is to be manually moved to the full "up" position and drained of water, prior to flight.

Aircraft Doors
The edges of the baggage door are sharp enough to cut. Personnel will not transit in or out of the cockpit door until the baggage door is latched shut.

The cockpit door has two latches. Both will be secured before, during, and after flight. The aircraft have two keys; the square one opens the doors. If a lock presents resistance, consider that the lock itself may be malfunctioning; ground the aircraft for maintenance. If the door cannot be successfully shut from within the cockpit, the crew will abort. In no case will the aircraft be launched if the door requires external assistance to shut.

When operating the upper outer latch of the Arrow's cockpit door, the pilot should press firmly with the left hand to compress the door seal prior to turning the latch handle. The purpose of this exercise is to reduce instances of breakage of the plastic latch handle.

Owing to its design, the stay at the lower front edge of the cockpit door is not a particularly sturdy part. If the door is open and not secured during ground operations, the stay most certainly will not withstand a direct tailwind gust; Tech pilots must maintain control of the door. If gusty conditions are present during preflight of the Arrow, Tech pilots will secure the door with at least the lower latch; it should not be left open. If, during taxi, gusty conditions are present but the weather is warm enough that opening the door is warranted, the right seat pilot will continuously maintain a hold on the door.

Be alert to loose or missing fasteners on the cockpit door or door frame. If observed, report such to the Chief Instructor. If a fastener is observed to be missing, search for it on the cockpit floor. If found, collect it and turn it in to Dispatch or the Chief Instructor.

Electrical/Avionics
The aircraft electrical system is 14 volts (12 volt battery). This fact would be critical in the rare case of an engine start with external power. Also, in the unlikely event of purchasing an aircraft battery away from Ruston, the vendor/installer must be reminded of it.

Our Arrows are not G1000-equipped. Instead, they are Garmin 500-equipped, having GDU620 PFD/MFD screens and dual GTN650 NavCom units. The NavCom/GPS units have touch screens. Sometimes, GTN #2, the lower NavCom unit may lack the terrain database. While these units share some architecture with the G1000, practice is still warranted. Training software is available on the computers in the flight planning room.

Arrow pilots may observe either of the following messages on either GTN 650 NavCom unit: "COOLING FAN – The cooling fan has failed." or "COOLING – GTN overtemp. Reducing backlight brightness." In either case, decrease cabin air temperature (if possible, perhaps by increasing airspeed or altitude), increase airflow into the cockpit (if possible), and cease using that GTN 650 (if possible) for the balance of the flight. Assuming no other malfunctions are present, finish the desired flight profile and report the event to the Chief Instructor or Assistant Chief.

Arrow pilots observing a "FAN FAILED" annunciation on the GDU 620 (PFD/MFD) will return to KRSN by the most direct route, accomplish a full-stop landing, and ground the aircraft.

G5 Standby Instrument
Each of our Arrows is equipped with a Garmin G5, which is intended for independent emergency use. In the event of total aircraft electrical failure, the G5 should automatically switch its power source to its own self-contained battery; nominally, this battery should power the instrument for four hours. In this condition, the battery status indicator, which shows the estimated percent charge is displayed automatically. After about one minute on its own battery power, the indicator should change to showing the estimated time (in hours and minutes) until the battery becomes empty. The current charge level of the battery is indicated by the filled-in portion of the battery icon. The battery icon turns yellow or red to indicate the self-contained battery's charge condition is low. In its stand-alone mode, the G5 provides only attitude, airspeed, altitude, and rate of turn information. Additional G5 information:

1. There are no required pilot actions at power-up; G5 should simply start working when the BATT MASTR is turned on. The G5 should display valid attitude information within the first minute of power-up.

2. When a G5 function fails, a red X is typically displayed over the instrument(s) or data experiencing the failure, in the usual Garmin fashion. If any of the three main functions (airspeed, altimeter, attitude) are inoperative, or if the preflight test of the battery is unsuccessful, the aircraft is restricted to VFR.

3. Tech pilots will observe the G5's battery state as directed in the checklist, and they will adjust the G5's altimeter to the current setting when applicable by twisting the knob. For our training and checking purposes, no other utilization of G5 capabilities during normal operations is required.

4. In normal operation, the G5 is powered by the aircraft electrical system and receives GPS information. It should display ground track in degrees magnetic and groundspeed information, which it receives from one of the aircraft's GTN650 GPS units. In the event of a malfunction where aircraft electric power remains available (such as PFD, AHRS, or ADC failures), the G5 should continue to receive GPS, and display track and groundspeed.

5. Our G5 is not connected to a magnetic heading source, so if GPS is unavailable, as in the case of total failure of the aircraft electrical system, track and groundspeed will be unavailable; refer to the magnetic compass for heading in this case. Additionally, pilots may observe a lack of track information when the aircraft is not moving; this is not a malfunction.

6. There are no required actions at power-down. After the BATT MASTR is turned off, do not touch the G5; it will shut down in 45 seconds. Observe that it does so prior to departing the aircraft.

7. The blue folder entitled "G5 DOCUMENTS" is stored with the AFM/POH, and is part of the aircraft's required equipment; it will not be removed from the aircraft.

8. If Tech pilots desire further information, the *G5 Electronic Flight Instrument Pilot's Guide for Certified Aircraft* can be found online. Note that our installation does not include the multitude of functions (e.g. HSI, flight director, etc.) that are possible for the G5. (Do not alter the unit's settings in an attempt to find these things.)

Flight Techniques
It desirable for Tech pilots to be standardized in their operation of the Arrow. While, by definition, technique is not mandatory, there are quite a few things that we do expect to see done "our way." A partial list follows, along with some further general information.

Parking brake and wing flap operations. These are completely different to a Cessna. Review these systems in the Information Manual, and practice the way these handles operate in a static airplane. Serious cautions apply to these items, as follows. For the parking brake to set properly, the toes brakes must first be released. Be alert to the aircraft moving when attempting to set the brake. Pilots must use extreme caution during flap retraction, paying close attention to airspeed when going from 25 degrees flaps to 10 degrees during initial climbout or, most especially, when executing a go-around.

Preflight inspection. When inspecting the landing gear prior to flight, Tech pilots are to observe the main gear from the rear, and ensure the presence of three nuts on each main gear side brace. The nuts in question are critical. They are pictured at Appendix 3. Inspection of this area may call for lying on the ground.

Strobes and beacon. The anti-collision light switch has three positions. The "FIN" is for ground operations, the white strobes are for flight. The landing light will not be used during daytime; the recognition lights are sufficient.

Navigation lights. The NAV LIGHT will be off during daytime operations. If the NAV LIGHT switch is on, the gear lights will be dim.

Autopilot test. Each Commercial student and each CFI applicant will conduct the autopilot test as printed in the checklist at least one time in the course of training.

Taxi. While the Arrow's theoretical ground turn radius is only 4' greater than the Skyhawk's, in practice, new pilots will probably find that smooth taxi turns in the Arrow take substantially more space than they expect; plan accordingly.

Ground check. With a warm engine or in warm weather, the propeller control is to be cycled one time during the ground check. If the engine and the weather are cold, then the propeller is to be cycled three times. "Cold weather" is defined, for these purposes, as <15°C.

Throttle usage, general. Pilots will allow two full seconds for idle-to-full power throttle movements. This is per the engine manufacturer. Failure to comply will result in RPM excursions and a "zoom" sound; these are not good for the engine.

Climbout. In the "Climb" portion of the "Amplified Normal Procedures", the manual specifies that the electric fuel pump is to be turned off "when reaching the desired altitude." Tech pilots will take this to mean above 1,000' AGL. For repeated patterns/landings, just leave it on. Once well clear of the ground after takeoff, Tech pilots climb at 104 KIAS unless a maximum angle or rate climb is warranted. Piper makes no reference to leaning the mixture during climb, so Tech pilots do not do this. "25-squared" as a cruise climb power setting is not appropriate for the Arrow. Full RPM and power is authorized all the way to cruise altitude. "25-squared" may be useful as an interim power/RPM setting when remaining in the traffic pattern after takeoff.

Initial level off. Tech pilots do not set the throttle/prop to the cruise setting(s) until they achieve the desired cruise speed. For local airwork, this is about 115 KIAS. The mixture lever has a safety lock, which is intended to prevent inadvertent engine shutdown. The lock must be retracted for proper leaning at altitude.

Steep turns. Steep turns for the commercial pilot are accomplished at 50 degrees of bank. Note that this can contribute to the over-banking tendency. The maneuver is begun with the typical cruise throttle/prop setting, 21" MAP/2,300 RPM, with throttle (only) being increased as needed from there. While not specified, virtually all Tech CFIs expect to see the first of the two steep turns flown to the left. Trim is optional, but may assist with the Arrow's stick forces, which are a bit heavier than the Skyhawk, to which the trainee is most likely accustomed. Note that airspeed loss during the turn(s), which is common, is not to exceed 10 knots.

Lazy eight. Generally, we want to see about 12 to 18 degrees pitch above and below level during lazy eights. And take your time with the roll inputs. Note that a complete maneuver requires a turn in both directions.

Chandelle. Use full power. Stage check instructors have no requirement to see a chandelle in each direction. Obviously, students will train the maneuver in both directions with their CFIs.

Slow flight. Slow flight speed is related to aircraft weight. With two pilots and full fuel in the Arrow, 60 KIAS is typical. However, it could be some smaller number; do not lock in on 60 KIAS. 65 KIAS is almost certainly too fast to call it "slow flight." The stall horn will be honored. If it sounds, power will be increased enough to make it silence.

Stalls, general. The commercial pilot, when tested, recovers at the first indication of a stall. This will almost certainly be the stall horn sounding. However, in training prior to the stage check/practical test, the Commercial student should be exposed to feeling of the Arrow's wings reaching the buffet. This is not wasted time, nor is it "wrong" learning; stall horns have been known to fail or be out of adjustment.

Accelerated maneuver stall. The accelerated stall is begun from approximately 75 KIAS, 45 degrees of bank, 15" MAP, and prop full forward. Once again, for check/test purposes, recovery should happen at the first stall indication, but training experience should include the buffet encountered if the horn is not honored. Guard against over-banking during the maneuver. There is no requirement as to VSI; a slight climb when beginning the maneuver is fine. Do not allow a descent, as this will make it take too long to achieve the stall. Tech pilots will not accomplish accelerated stalls by "whipping" up from level flight.

Cross-control stall. Cross-control stalls should begin from a 30 degree banked gliding turn, with idle power, prop full forward, gear extended, and flaps up. Apply full, or at least substantial, rudder in the direction of the turn, to develop a skid. Apply aileron away from the turn as the aircraft tries to over-bank. Apply elevator to keep the nose up. The idea is to simulate what a pilot might do when overshooting the base-to-final approach turn. For additional realism, consider setting a "floor" altitude, which is the simulated ground. Upon stall, relax all these inputs, achieve coordinated flight, and apply full throttle.

Steep spirals. Steep spirals should be started on a specific heading, flying downwind. A complete maneuver consists of three revolutions of uniform radius, correcting for wind, rolling out on the heading on which the maneuver began. Configuration to begin is idle power, prop full forward, gear extended, flaps 10 degrees, and 79 KIAS. 79 KIAS is the minimum speed throughout. More speed will be required as lift demands are made; the stall horn will be honored. With this configuration, it will require substantial altitude to complete three turns prior to reaching 1,500' AGL—way more than the Skyhawk. Note that focus on the maneuver can distract the pilot from enrichening the mixture with descent.

APPROACH AND LANDING and REPEATED LANDINGS checklists. Crews will accomplish the APPROACH AND LANDING checklist just prior to VFR pattern entry (or commencement of an instrument approach); it is complete when the flaps are in the desired position for landing and the gear down report has been made. The GUMP memory items do not suffice for this checklist. Note that if the pilot is not yet ready to lower the landing gear, then the

checklist is to be paused. There is no such thing as bypassing a checklist step with a promise to do it later. If remaining in the pattern, then the crew will accomplish the REPEATED LANDINGS checklist on downwind each circuit.

Power-off 180° accuracy approach and landing. The "power-off 180" is begun by arriving at the key position abeam the desired touchdown point (which should be stated in advance), configured with gear extended, flap 10 degrees, and prop full forward. Close the throttle, achieve 79 KIAS or greater, and turn towards the runway. If sharing the pattern with others, it is good technique to announce "power-off 180" so that they know you're making a comparatively short approach. Additional useful information would be your full-stop or touch-and-go intentions. And don't forget to report "gear down" on base or final. The wind will determine how much bank is needed, how much time is spent on base leg, and where to place the final approach. Do not be overly alarmed at the altitude lost in the base turn, as glide will improve markedly as bank is reduced. Once wings level on final, analyze height versus distance to fly. This will determine if an increase in flap setting is warranted. If full flaps are insufficient to get the aircraft down, a forward slip may be employed. Note that the Airplane Flying Handbook discusses 90° and 360° approaches to accuracy landings. Although not tested, these maneuvers are useful learning tools. Crews are strongly encouraged to practice these at airfields that are not busy.

Touch-and-go landings. Pilots operating in hot temperatures and/or with heavy fuel weights are authorized to select 25° flaps during the ground roll portion of the touch-and-go. If accomplishing a touch-and-go with 0° or 10°, do not lower them to 25°.

Emergency gear extension. Use of the Emergency Landing Gear Extension procedure and (and system) for training purposes is prohibited, due to wear and tear on the emergency extend valve.

CREW REST AND FLIGHT DUTY TIME

Duty Time
Tech pilots' flight duty is regulated. Flight duty begins at the scheduled start time of any Tech academic, flight, device, ground training, or student work activity, and runs to the individual's final Tech flight activity Ramp In time on any given day. Louisiana Tech University pilots operating Tech aircraft will not exceed 12 hours consecutive hours of flight duty in one day. Additionally, if an individual operates in other than Tech aircraft, flight duty, as to operating Tech aircraft, is considered to have begun at the show time for the non-Tech flight duty.

Dispatcher duty preceding flying is considered flight duty. So, for example, dispatchers will not open Flight Ops at 0700L and then fly past 1900L. Dispatcher duty following flying is not flight duty. However, the rest rules below would still apply.

Crew Rest
Tech pilots will not show up at Tech Flight Operations for any flight activity in Tech aircraft less than 10 hours from the completion of the previous day's final academic, flight, sim, ground training, or student work activity. "Completion of the previous day's final activity" means exiting Davison Hall or Tech Flight Operations. In the case of off-station or non-Tech flying, it means leaving the FBO.

Tech pilots who are obligated to report for academic, sim, ground training, or student work activities less than 10 hours from completion of the previous day's final activity are grounded

(from flight in Tech aircraft) for crew rest for not less than 12 hours from the completion of those activities, or until 0700L the following day, whichever is later.

Tech flight instructors will have at least one full day (24 hours) without Tech flight activities per fourteen days.

Exceptions to these crew rest and duty rules require Chief Instructor approval. Standing exception: CFIs operating aircraft for currency are exempt from the duty and rest rules, so long as they operate under the supervision of a fellow CFI who is in compliance with the rest and duty rules above.
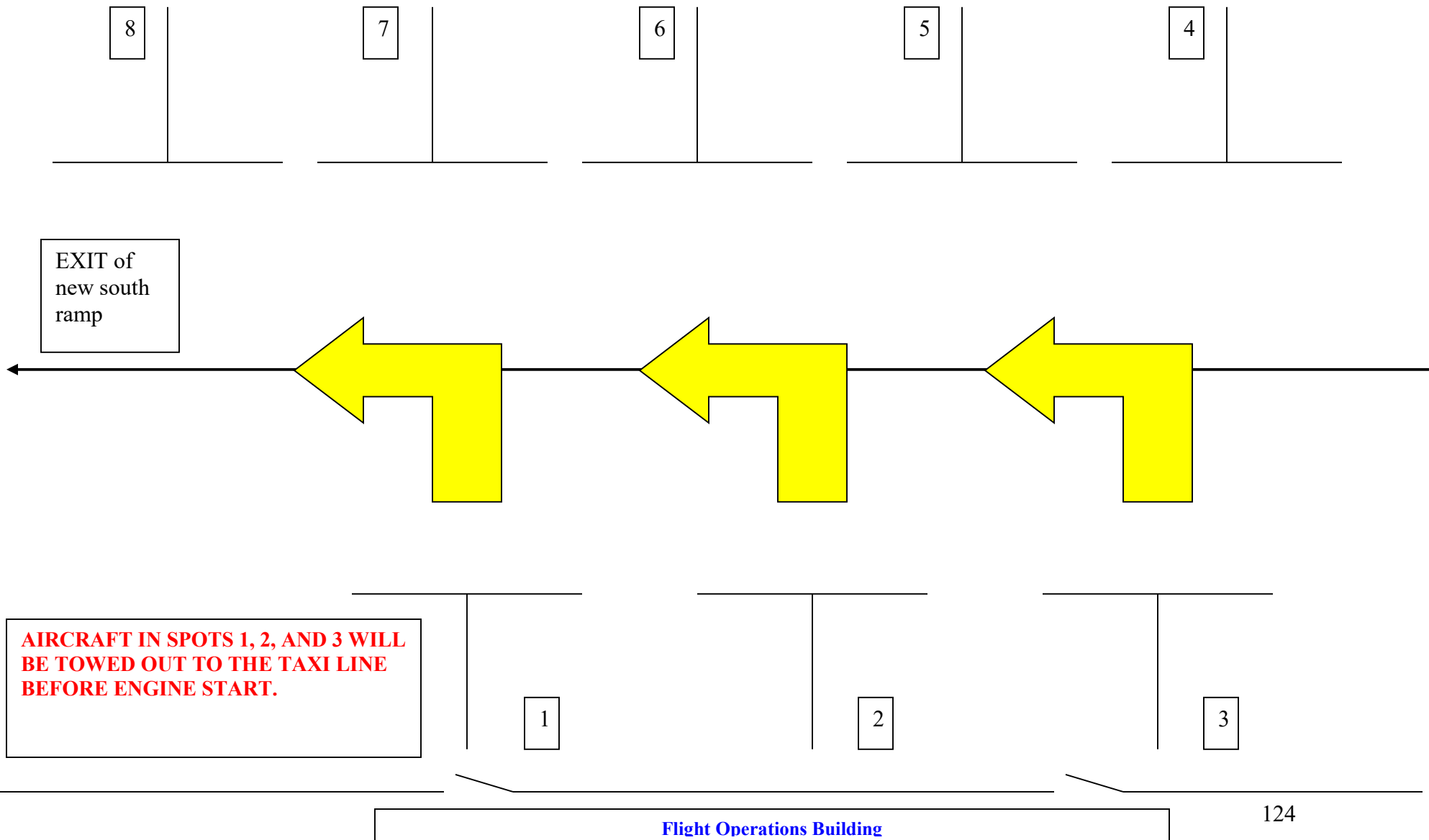
CONCLUSION

Flight safety is paramount. Louisiana Tech University has operated its flight operation for over 50 years with very few accidents, incidents, and fatalities. This is due to the dedication and airmanship of Tech's instructor force. Adherence to all of the foregoing will assist our personnel in maintaining a good safety record.
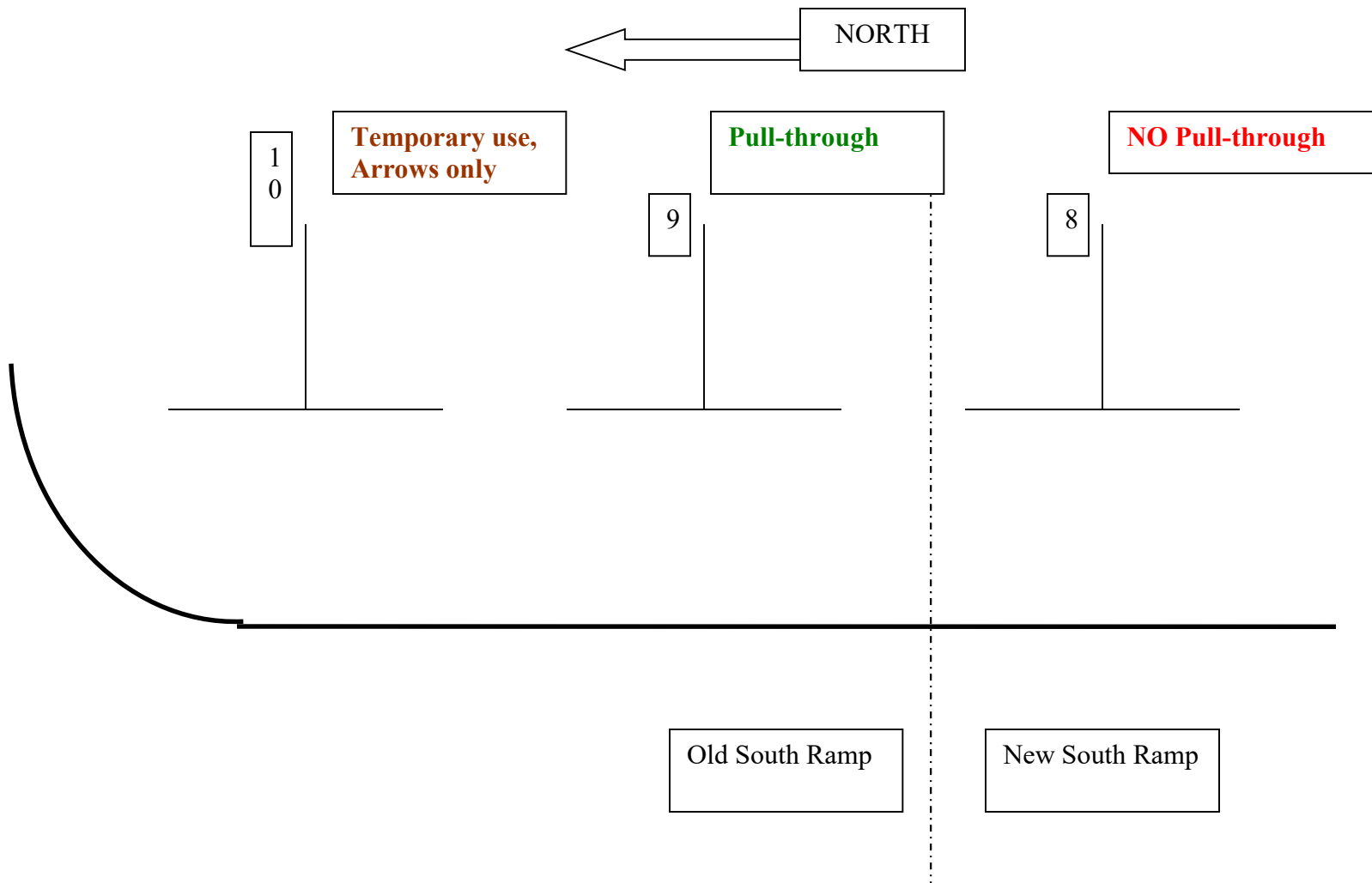
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APPENDICES
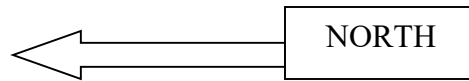
NORTH ⬅

Appendix 1, "New" South Ramp Diagrams. Note: Spots 9 and 10 are on the old South Ramp, directly north of Spot 8. **Spot 10 is used ONLY for temporary (30 minutes or less) Arrow parking.**
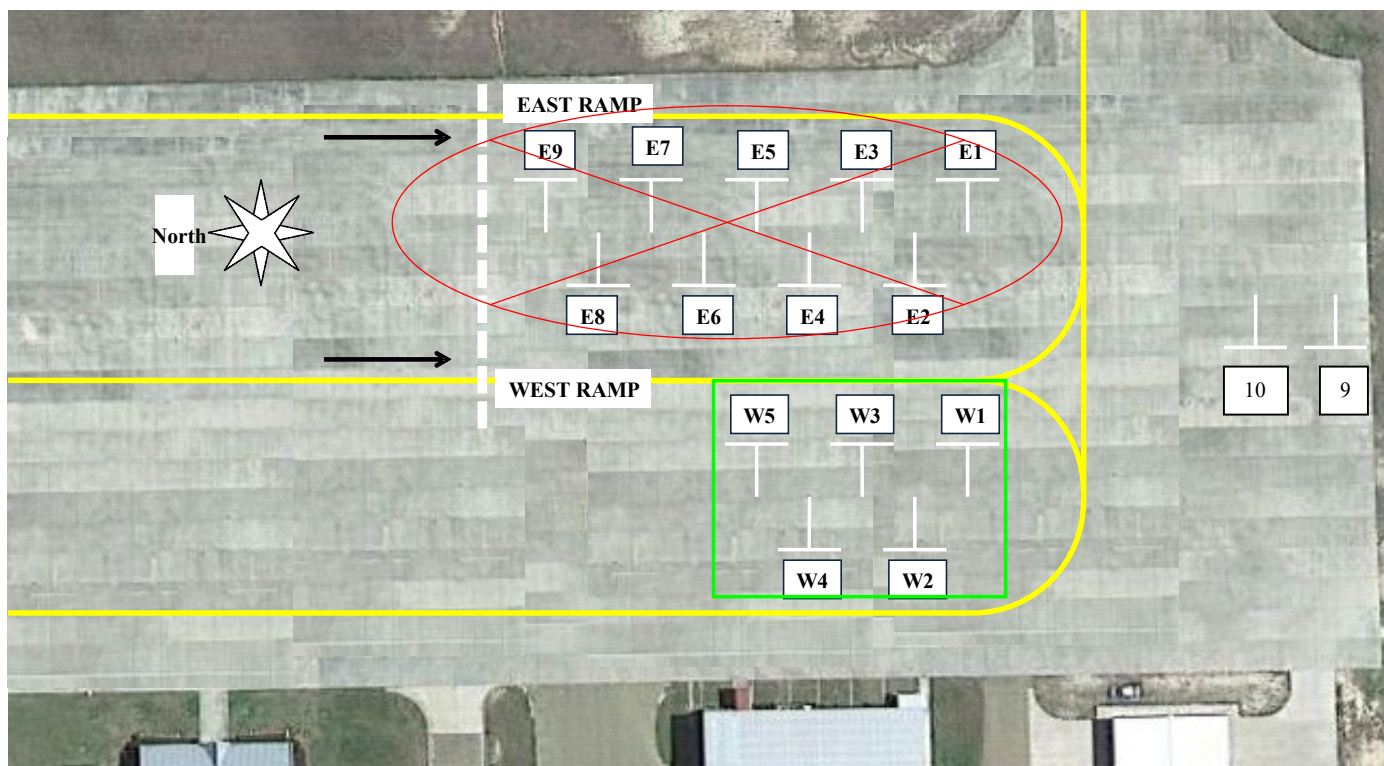
| 8 | 7 | 6 | 5 | 4 |

EXIT of new south ramp

⬅ ⬅ ⬅

AIRCRAFT IN SPOTS 1, 2, AND 3 WILL BE TOWED OUT TO THE TAXI LINE BEFORE ENGINE START.

| 1 | 2 | 3 |

Flight Operations Building

NORTH

Temporary use,
Arrows only

Pull-through

NO Pull-through

10

9

8

Old South Ramp

New South Ramp

Appendix 1 (continued)

Appendix 2, "Normal" Skyhawk Parking on the "Old" South Ramp

KRSN Ramp Overview

Appendix 3, PA-28R-201 Main Landing Gear Side Brace Inspection Points

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