

AVSC 4302-110 ADVANCED AIRCRAFT SYSTEMS**Texas A&M University - Central Texas****Summer 2021****COURSE DATES, MODALITY, AND LOCATION**

June 07, 2021 to August 13, 2021.

This is a 100% online course, and uses the A&M-Central Texas Canvas Learning Management System [<https://tamuct.instructure.com/>].

INSTRUCTOR AND CONTACT INFORMATION**Instructor: V. Carson Pearce****Office: 302M Beck Family Heritage Hall****Phone: 254-519-5776****Email: *carson.pearce@tamuct.edu*****Office Hours:**

Readily accessible through Canvas Message, which is checked daily during the week and once a day on weekends. Will respond within 24-36 hours during the week and within 36 hours on the weekend. Be sure to allow plenty of lead time prior to a due date if you are asking about an assignment.

Mode of instruction and course access: This course uses the A&M-Central Texas Canvas Learning Management System [<https://tamuct.instructure.com/>]. It is 100% online.

Student-instructor interaction: All contact and assignment submissions will be made via Canvas. Mail is checked several times during a day. Weekend response may take longer, so allow extra time for me to reply to your emails.

WARRIOR SHIELD**Emergency Warning System for Texas A&M University-Central Texas**

Warrior Shield is an emergency notification service that gives Texas A&M University-Central Texas the ability to communicate health and safety emergency information quickly via email, text message, and social media. All students are automatically enrolled in Warrior Shield through their myCT email account.

Connect to Warrior Shield by [911Cellular](https://portal.publicsafetycloud.net/Account/Login) [<https://portal.publicsafetycloud.net/Account/Login>] to change where you receive your alerts or to opt out. By staying enrolled in Warrior Shield, university officials can quickly pass on safety-related information, regardless of your location.

COURSE INFORMATION

Course Overview and description:

Students will study the business skills and knowledge needed to operate a small aviation business. They will also gain an understanding of the operational managerial aspects of general aviation and corporate business aviation.

Course Objective:

Student Learning Outcomes (SLOs)

Upon completion of this course, the student will be able to:

1. Apply mathematics, science, and applied science skills to accurately solve Flight Engineer (FE) practice test questions with a minimum 80% correct.
2. Analyze and interpret FE practice test data provided to answer with minimum of 80% correct.
3. Describe the major systems of advanced aircraft.
4. Discuss the unique characteristics and responsibilities of piloting advanced aircraft.

Competency Goals Statement (Certifications and Standards):

The course will be considered successfully completed when the student has demonstrated through posted written assignments and exams that they have developed an increased knowledge of the major components of Advanced Aircraft Systems.

Required Reading and Textbook(s):

1. **ASA Flight Engineer Test Prep. 2021**

Supplemental Suggested Materials:

1. Everything Explained for the Professional Pilot, Richie Lengel
2. American Psychological Association Publication Manual, 7th Edition

COURSE REQUIREMENTS/SPECIFICATIONS

Weekly Discussion Post: There will be one weekly discussion post to be submitted over topics presented by instructor. **Check in daily for instructor notes, updates and the posting of**

audio/video topics. Posts will be graded for writing ability, original content, punctuation and grammar and APA formatting. Required responses will use a minimum of two hundred words in your well composed paragraph response, and 100 words to two classmate's posts.

AVSC 4302 Discussion Post Rubric

Points	10	7	3	0
Quality of Post	Appropriate comments: thoughtful, reflective, and respectful of other's postings. Full APA style.	Appropriate comments and responds respectfully to other's postings. Moderate APA style.	Responds, but with minimum effort. (e.g. "I agree with Dan") Little to no APA style.	No posting.
Relevance of Post	Posts topics related to discussion topic; prompts further discussion of topic	Posts topics that are related to discussion content	Posts topics which do not relate to the discussion content; makes short or irrelevant remarks	No posting.
Contribution to the Learning Community	Aware of needs of community; attempts to motivate the group discussion; presents creative approaches to topic	Attempts to direct the discussion and to present relevant viewpoints for consideration by group; interacts freely	Does not make effort to participate in learning community as it develops	No feedback provided to fellow student.

Research Paper: Your research paper shall be about a detailed description of a key aircraft system that changed the way modern commercial aircraft operate or fly. For instance, you could report on the automatic pressurization system of a modern airliner or redundant hydraulic or flight-path computer stabilization systems. Full use of APA formatting and rules apply. 10 pages minimum (not including title page, abstract, references and appendices) Double-space. Full APA format (7th Edition) with page numbers and section headings.

AVSC 4302 Research Rubric

Points	10	7	3	0
Quality of Case Research	Full use of APA formatting with photos and clearly communicated, thoughtful detail and conclusions.	Partial use of APA formatting with some detail and some support material.	Marginal use of APA formatting and basic material.	No paper.
Relevance of Case Research Conclusions	Submitted case materials and narrative shows logical linkage to modern airline systems.	Submitted case materials and narrative are somewhat relevant to modern airliner systems and concepts.	Submitted case materials and narrative shows little linkage to the subject matter flow.	No paper.

Suggested Course Materials:

2. ASA Flight Engineer Test Prep. 2021

Supplemental Suggested Materials:

- 3. Everything Explained for the Professional Pilot, Richie Lengel
- 4. American Psychological Association Publication Manual, 6th Edition

VIDEO LINKS: There are many posted video links throughout your weekly course modules. They correspond directly with the readings in your textbook and will bring to life the many colorful aspects of aviation history. These are a small sample of documentaries and many other historical aviation movies that are available on You Tube. Others can be found for sale in DVD formats, Blu-ray and streaming video that are available commercially. I will be monitoring the number of times these are accessed, as they are an integral part of your course objectives on learning aviation history.

Two Quizzes: There will be two tests during the semester. Each test covers only the material presented during the previous weeks. The tests are broken into a mid-term and a final exam.

Point based grade components:

Mid-Term	10% (SLOs 1-4)
Final	20% (SLOs 1-4)
Research Paper	10% (SLOs 3-4)
Weekly Discussion Posts	60% (SLOs 1-4)

Total
100%

Posting of Grades

All student grades will be posted on the Canvas Grade book and students should monitor their grading status through this tool. I will attempt to post grades for all assignments and discussions within one week after the due date, unless I let you know otherwise. Grades on exams will be available immediately (unless essays must be graded as well).

Grading Policies

Individual Performance: It is vital that you are active in the course and complete all work in a professional fashion. One of the biggest issues with student success in online courses is simply not submitting work on time. You are expected to read the chapters as assigned in the syllabus as well as read or view any supplemental resources that may be found in the Module content folders for that period.

Quality Work: All work submitted for grading shall be of upper level quality: Depth of analysis, grammatical structure, etc. **Your work will be checked for plagiarism using online plagiarism assessment programs. Plagiarism will not be tolerated.**

Identifying Submissions: Submissions must clearly identify the student, course, and the title of the assignment (Last Name, Course Name, and Assignment) or (Smith_GBK301_Essay1).

Written Assignment Requirements: Submissions will be in accordance with The Publication Manual of the American Psychological Association, 7th ed. All written work must be submitted utilizing Microsoft Word in either a .doc or .docx format. **Students whose assignment includes plagiarism will receive a 0 on the assignment and possible referral to Student Affairs.**

However, I reserve the right to reduce the penalty if I believe plagiarism was unintentional or very minor in impact.

Due Dates and Late Submissions: The assignment instructions and deadlines are clearly laid out in the syllabus. Though some assignments are fairly involved, you do not have more than one assignment due in any week. As such, it is expected that all work will be submitted on time, as timeliness is an important aspect of professional communications and behavior. If you encounter an issue, please let me know as soon as possible. It is much easier to discuss issues before due dates rather than after. Late work is not accepted.

Changes to Syllabus: This syllabus serves as an instructional and study planning document. Although every effort will be made to maintain the schedule and activities presented herein, it may become necessary during the course of the semester to make changes to the syllabus. In such events, changes will be announced and students will receive written notice as soon as possible.

COURSE OUTLINE AND CALENDAR

Complete 10 Week Summer Semester Course Calendar:

Week 1 June 07 – 13

Topics: Introduction to Advanced Aircraft Systems, Special Airworthiness Requirements, Instrument and Equipment Requirements, Airman and Crewmember Requirements, Flight Operations. (Student Learning Outcomes: SLO 1, SLO 2.)

- Assigned Text Book Reading – Complete ASA Flight Engineer (FE) pages 1-11 through 1-20 and pages 1-28 to 1-30
- Read Lesson 1
- Research Paper Introduction and Explanation
- Discussion Post (Introduction)

Week 2 June 14 - 20

Topics: Aerodynamics:

(Student Learning Outcomes: SLO 1, SLO 2, SLO 3.)

- Assigned Text Book Reading – Complete ASA FE Test Prep Chapter 2
- Read Lesson 2
- Discussion Post

Week 3 June 21 – 27

Topics: Meteorology

(Student Learning Outcomes: SLO 1, SLO 2, SLO 3, SLO 4)

- Assigned Text Book Reading – Complete ASA FE Test Prep Chapter 3
- Read Lesson 3
- Discussion Post

Week 4 June 28 – July 04**Topic: Engine Systems**

(Student Learning Outcomes: SLO 1, SLO 2, SLO 3, SLO4.)

- Assigned Text Book Reading – Complete ASA FE Test Prep Chapter 5, pages 5-3 to 5-40
- Read Lesson 4
- Discussion Post
- Submit Research Paper Topic (**Only the topic**, for instructor approval)

Week 5 July 05 – July 11**Topic: Fuel Systems**

(Student Learning Outcomes: SLO 1, SLO 2, SLO 3, SLO4.)

- Assigned Text Book Reading – Complete ASA FE Test Prep Chapter 6.
- Read Lesson 5
- Discussion Post
- Review ASA FE Test Prep Chapters 1-7 for mid-term examination preparation.

Week 6 July 12 – July 18**Topic: Hydraulic Systems**

(Student Learning Outcomes: SLO 1, SLO 2, SLO 3, SLO4.)

- Assigned Text Book Reading – Complete ASA FE Test Prep Chapter 7.
- Read Lesson 6
- Discussion Post
- Review ASA FE Test Prep Chapters 1-7 for mid-term examination preparation

Week 7 July 19 – July 25**Topic: Electrical Systems**

(Student Learning Outcomes: SLO 1, SLO 2, SLO 3, SLO4.)

- Assigned Text Book Reading – Complete ASA FE Test Prep Chapter 8
- Read Lesson 7
- Discussion Post
- Mid-Term exam

Week 8 July 26 – Aug 01**Topic: Pneumatic Systems**

(Student Learning Outcomes: SLO 1, SLO 2, SLO 3, SLO 4.)

- Assigned Text Book Reading – Complete ASA FE Test Prep Chapter 9
- Read Lesson 8
- Discussion Post

Week 9 Aug 02 – Aug 08

Topic: Performance Computations

(Student Learning Outcomes: SLO 1, SLO 2, SLO 3, SLO 4.)

- Assigned Text Book Reading – Complete ASA FE Test Prep Chapter 13
- Read Lesson 9
- Discussion Post
- Review ASA FE Test Prep Chapters 1-13 for final examination preparation
- Submit Systems Research Paper

Week 10 August 08 – Aug 13

Topic: Final Exam

(Student Learning Outcomes: SLO 1, SLO 2.)

- Final Exam
- Discussion Post

Important Dates:

June 07, 2021	Classes Begin for First 5-, 10-, and 8-Week Session
June 22, 2021	Deadline to Drop 10-Week Classes with No Record
July 02, 2021	Deadline for Summer Graduation Application
July 05, 2021	Independence Day (University Closed)
July 23, 2021	Deadline to Drop First 10-Week Classes with a Quit (Q) or Withdraw (W)
August 13, 2021	Classes End for 10- and Second 5-Week Sessions
August 13, 2021	Summer Commencement Ceremony Bell County Expo Center 7PM

Technology Requirements

This course will use the A&M-Central Texas Instructure Canvas learning management system.

We strongly recommend the latest versions of Chrome or Firefox browsers. *Canvas no longer supports any version of Internet Explorer.*

Logon to A&M-Central Texas Canvas [<https://tamuct.instructure.com/>] or access Canvas through the TAMUCT Online link in myCT [<https://tamuct.onecampus.com/>]. You will log in through our Microsoft portal.

Username: Your MyCT email address. Password: Your MyCT password

Canvas Support

Use the Canvas Help link, located at the bottom of the left-hand menu, for issues with Canvas. You can select “Chat with Canvas Support,” submit a support request through “Report a Problem,” or call the Canvas support line: 1-844-757-0953.

For issues related to course content and requirements, contact your instructor.

Online Proctored Testing

A&M-Central Texas uses Proctorio for online identity verification and proctored testing. This service is provided at no direct cost to students. If the course requires identity verification or proctored testing, the technology requirements are: Any computer meeting the minimum computing requirements, plus web camera, speaker, and microphone (or headset). Proctorio also requires the Chrome web browser with their custom plug in.

Other Technology Support

For log-in problems, students should contact Help Desk Central

24 hours a day, 7 days a week

Email: helpdesk@tamu.edu

Phone: (254) 519-5466

[Web Chat](http://hdc.tamu.edu): [<http://hdc.tamu.edu>]

Please let the support technician know you are an A&M-Central Texas student.

UNIVERSITY RESOURCES, PROCEDURES, AND GUIDELINES

Drop Policy

If you discover that you need to drop this class, you must complete the [Drop Request](#) Dynamic Form through Warrior Web.

[<https://dynamicforms.ngwebsolutions.com/casAuthentication.ashx?InstID=eaed95b9-f2be-45f3-a37d-46928168bc10&targetUrl=https%3A%2F%2Fdynamicforms.ngwebsolutions.com%2Fsubmit%2FForm%2Fstart%2F53b8369e-0502-4f36-be43-f02a4202f612>].

Faculty cannot drop students; this is always the responsibility of the student. The Registrar's Office will provide a deadline on the Academic Calendar for which the form must be completed. Once you submit the completed form to the Registrar's Office, you must go into Warrior Web and confirm that you are no longer enrolled. If you still show as enrolled, FOLLOW-UP with the Registrar's Office immediately. You are to attend class until the procedure is complete to avoid penalty for absence. Should you miss the drop deadline or fail to follow the procedure, you will receive an F in the course, which may affect your financial aid and/or VA educational benefits.

Academic Integrity

Texas A&M University-Central Texas values the integrity of the academic enterprise and strives for the highest standards of academic conduct. A&M-Central Texas expects its students, faculty, and staff to support the adherence to high standards of personal and scholarly conduct to preserve the honor and integrity of the creative community. Any deviation by students from this expectation may result in a failing grade for the assignment and potentially a failing grade for the course. All academic misconduct concerns will be referred to the Office of Student Conduct. When in doubt on collaboration, citation, or any issue, please contact your instructor before taking a course of action.

For more [information regarding the Student Conduct process](https://www.tamuct.edu/student-affairs/student-conduct.html),
[https://www.tamuct.edu/student-affairs/student-conduct.html].

If you know of potential honor violations by other students, you may [submit a report](https://cm.maxient.com/reportingform.php?TAMUCentralTexas&layout_id=0),
[https://cm.maxient.com/reportingform.php?TAMUCentralTexas&layout_id=0].

Academic Accommodations

At Texas A&M University-Central Texas, we value an inclusive learning environment where every student has an equal chance to succeed and has the right to a barrier-free education. The Office of Access and Inclusion is responsible for ensuring that students with a disability receive equal access to the university's programs, services and activities. If you believe you have a disability requiring reasonable accommodations, please contact the Office of Access and Inclusion, WH-212; or call (254) 501-5836. Any information you provide is private and confidential and will be treated as such.

For more information, please visit our [Access & Inclusion](https://tamuct.instructure.com/courses/717) Canvas page (log-in required)
[https://tamuct.instructure.com/courses/717]

Important information for Pregnant and/or Parenting Students

Texas A&M University-Central Texas supports students who are pregnant and/or parenting. In accordance with requirements of Title IX and related guidance from US Department of Education's Office of Civil Rights, the Dean of Student Affairs' Office can assist students who are pregnant and/or parenting in seeking accommodations related to pregnancy and/or parenting. Students should seek out assistance as early in the pregnancy as possible. For more information, please visit [Student Affairs](https://www.tamuct.edu/student-affairs/pregnant-and-parenting-) [https://www.tamuct.edu/student-affairs/pregnant-and-parenting-]

students.html]. Students may also contact the institution's Title IX Coordinator. If you would like to read more about these [requirements and guidelines](#) online, please visit the website [<http://www2.ed.gov/about/offices/list/ocr/docs/pregnancy.pdf>].

Title IX of the Education Amendments Act of 1972 prohibits discrimination on the basis of sex and gender—including pregnancy, parenting, and all related conditions. A&M-Central Texas is able to provide flexible and individualized reasonable accommodation to pregnant and parenting students. All pregnant and parenting students should contact the Associate Dean in the Division of Student Affairs at (254) 501-5909 to seek out assistance. Students may also contact the University's Title IX Coordinator.

Tutoring

Tutoring is available to all A&M-Central Texas students, on a remote online basis. Visit the Academic Support Community in Canvas to view schedules and contact information. Subjects tutored on campus include Accounting, Advanced Math, Biology, Finance, Statistics, Mathematics, and Study Skills. Student success coaching is available online upon request.

If you have a question regarding tutor schedules, need to schedule a tutoring session, are interested in becoming a tutor, success coaching, or have any other question, contact Academic Support Programs at (254) 501-5836, visit the Office of Student Success at 212F Warrior Hall, or by emailing studentsuccess@tamuct.edu.

Chat live with a tutor 24/7 for almost any subject from on your computer! Tutor.com is an online tutoring platform that enables A&M-Central Texas students to log in and receive online tutoring support at no additional cost. This tool provides tutoring in over 40 subject areas except writing support. Access Tutor.com through Canvas.

University Writing Center

University Writing Center: The University Writing Center (UWC) at Texas A&M University—Central Texas (TAMUCT) is a free service open to all TAMUCT students. For the Summer 2021 semester, all services will be online as a result of the COVID-19 pandemic. The hours of operation are from 10:00 a.m.-4:00 p.m. Monday thru Thursday with satellite hours Monday thru Thursday from 6:00-9:00 p.m. The UWC is also offering hours from 12:00-3:00 p.m. on Saturdays.

Tutors are prepared to help writers of all levels and abilities at any stage of the writing process. By providing a practice audience for students' ideas and writing, our tutors highlight the ways in which they read and interpret students' texts, offering guidance and support throughout the various stages of the writing process. While tutors will not write, edit, or grade papers, they will assist students in developing more effective composing practices. Whether you need help brainstorming ideas, organizing an essay, proofreading, understanding proper citation practices, or just want a quiet place to work, the UWC is here to help!

Students may arrange a one-to-one session with a trained and experienced writing tutor by making an appointment via [WCOonline](https://tamuct.mywconline.com/) [https://tamuct.mywconline.com/]. In addition, you can email Dr. Bruce Bowles Jr. at bruce.bowles@tamuct.edu if you have any questions about the UWC and/or need any assistance with scheduling.

University Library

The University Library provides many services in support of research across campus and at a distance. We offer over 200 electronic databases containing approximately 400,000 eBooks and 82,000 journals, in addition to the 96,000 items in our print collection, which can be mailed to students who live more than 50 miles from campus. Research guides for each subject taught at A&M-Central Texas are available through our website to help students navigate these resources. On campus, the library offers technology including cameras, laptops, microphones, webcams, and digital sound recorders.

Research assistance from a librarian is also available 24 hours a day through our online chat service, and at the reference desk when the library is open. Research sessions can be scheduled for more comprehensive assistance, and may take place virtually through WebEx, Microsoft Teams or in-person at the library. Assistance may cover many topics, including how to find articles in peer-reviewed journals, how to cite resources, and how to piece together research for written assignments.

Our 27,000-square-foot facility on the A&M-Central Texas main campus includes student lounges, private study rooms, group work spaces, computer labs, family areas suitable for all ages, and many other features. Services such as interlibrary loan, TexShare, binding, and laminating are available. The library frequently offers workshops, tours, readings, and other events. For more information, please visit our [Library website](http://tamuct.libguides.com/index) [http://tamuct.libguides.com/index].

OPTIONAL POLICY STATEMENTS

A Note about Sexual Violence at A&M-Central Texas

Sexual violence is a serious safety, social justice, and public health issue. The university offers support for anyone struggling with these issues. University faculty are mandated reporters, so if someone discloses that they were sexually assaulted (or a victim of Domestic/Dating Violence or Stalking) while a student at TAMUCT, faculty members are required to inform the Title IX Office. If you want to discuss any of these issues confidentially, you can do so through Student Wellness and Counseling (254-501-5955) located on the second floor of Warrior Hall (207L).

Sexual violence can occur on our campus because predators often feel emboldened, and victims often feel silenced or shamed. It is incumbent on ALL of us to find ways to actively create environments that tell predators we don't agree with their behaviors and tell survivors we will support them. Your actions matter. Don't be a bystander; be an agent of change. For additional

information on campus policy and resources visit the [Title IX webpage](https://www.tamuct.edu/compliance/titleix.html) [<https://www.tamuct.edu/compliance/titleix.html>].

Behavioral Intervention

Texas A&M University-Central Texas cares about the safety, health, and well-being of its students, faculty, staff, and community. If you are aware of individuals for whom you have a concern, please make a referral to the Behavioral Intervention Team. Referring your concern shows you care. You can complete the [referral](https://cm.maxient.com/reportingform.php?TAMUCentralTexas&layout_id=2) online [https://cm.maxient.com/reportingform.php?TAMUCentralTexas&layout_id=2].

Anonymous referrals are accepted. Please see the [Behavioral Intervention Team](https://www.tamuct.edu/student-affairs/bat.html) website for more information [<https://www.tamuct.edu/student-affairs/bat.html>]. If a person's behavior poses an imminent threat to you or another, contact 911 or A&M-Central Texas University Police at 254-501-5800.

INSTRUCTOR POLICIES

Life happens. As such, if a student realizes that a posting, quiz or assignment will be late due to unforeseen emergency or special circumstance, please notify the instructor as soon as is practical to assess the impact on the course. The instructor may grant extra time to complete an assignment within the confines of the 10-week course. However, if it becomes apparent that this policy is abused, or that the request was fraudulent, the instructor reserves the right to place an unfavorable grade for incomplete work.

Copyright Notice

Students should assume that all course material is copyrighted by the respective author(s). Reproduction of course material is prohibited without consent by the author and/or course instructor. Violation of copyright is against the law and Texas A&M University-Central Texas' Code of Academic Honesty. All alleged violations will be reported to the Office of Student Conduct.

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