

**COURSE TITLE:** Fundamentals of Aerodynamics  
**COURSE NUMBER:** AERO/EXL 3440  
**COURSE SEMESTER CREDIT HOURS:** Three Hours  
**INSTRUCTORS NAME:** Nate Callender  
**CONTACT INFORMATION:**

Office Phone: (615) 898-5983  
Home Phone: (615) 598-6552  
e-mail: nate.callender@mtsu.edu

**Textbooks:**

Aerodynamics for Naval Aviators (Not Required)      Publication Manual of the APA, 6<sup>th</sup> Ed. (Required)  
Author: Hugh H. Hurt      Publisher: American Psychological Association  
Publisher: Aviation Supplies and Academics, Inc.

**Method of Presentation:**

The material will be covered using the lecture format.

**Method of Evaluation:**

Homework & Quizzes      20%  
Four Tests:      15% each  
Project      20%

**Grading Scale:**

90 – 100      A  
80 – 89      B  
70 – 79      C  
60 – 69      D  
Below 60      F

**Course Objectives:**

1. Students will demonstrate the ability to apply concepts from mathematics and physics to aerostatics, aerodynamics, and aircraft design.
2. Students will demonstrate the ability to analyze, interpret and develop atmospheric and aerodynamic data.
3. Students will demonstrate the ability to apply classroom knowledge to determining aerodynamic characteristics in simulated and/or real world flight tests.
4. Students will demonstrate the ability to effectively communicate technical content in writing using appropriate aviation terminology.
5. Students will demonstrate the ability to use data gathering and manipulation techniques and technology appropriate to aerodynamic ground and/or flight tests.

**ADA Statement:**

Reasonable Accommodations for Students with Disabilities: If you have a disability that may require assistance or accommodations, or if you have any questions related to any accommodation for testing, note taking, reading, etc., please speak with me as soon as possible. You may also contact the Office of Disabled Student Services (898-2783) with any questions about such services.

**Attendance:**

ATTENDANCE IS EXPECTED (See catalog)

**Policy Regarding Make-Up Work:**

Make-up tests will only be given for verifiable emergencies. Notify me as soon as possible after missing a test to schedule a make-up date.

**Flight Project:**

A flight test will be performed in the University of Tennessee Space Institute's (UTSI) Piper PA-32 Saratoga, if available. This aircraft is equipped with student observation stations from which aerodynamic/performance data can be collected. Students will collect data during these flights in groups of 3-5 with a UTSI pilot at the controls. The flight data will be presented in a report to be turned in on the final day of class. The flight is a course requirement. A flight fee is required.

**Tennessee Education Lottery Scholarship:**

To retain Tennessee Education Lottery Scholarship eligibility, you must earn a cumulative TELS GPA of 2.75 after 24 and 48 attempted hours and a cumulative TELS GPA of 3.0 thereafter. You may qualify with a 2.75 cumulative GPA after 72 attempted hours (and subsequent semesters), if you are enrolled full-time and maintain a semester GPA of at least 3.0. A grade of C, D, F, FA, or I in this class may negatively impact TELS eligibility. Dropping or stopping attendance in a class after 14 days may also impact eligibility; if you withdraw from or stop attending this class and it results in an enrollment status of less than full time, you may lose eligibility for your lottery scholarship. Lottery recipients are eligible to receive the scholarship for a maximum of five years from the date of initial enrollment, or until reaching 120 TELS attempted hours or earning a bachelor degree. For additional Lottery rules, please refer to your Lottery Statement of Understanding form

<http://mtsu.edu/financialaid/forms/Lottery%20Statement%20of%20Understanding%202013-14.pdf> or contact the Financial Aid Office at 898-2830.

**Academic Misconduct:**

Middle Tennessee State University takes a strong stance against academic misconduct. Academic Misconduct includes, but is not limited to, plagiarism, cheating, fabrication, or facilitating any such act. For purposes of this section, the following definitions apply:

- (1) **Plagiarism:** The adoption or reproduction of ideas, words, statements, images, or works of another person as one's own without proper attribution. This includes self-plagiarism, which occurs when an author submits material or research from a previous academic exercise to satisfy the requirements of another exercise and uses it without proper citation of its reuse.
- (2) **Cheating:** Using or attempting to use unauthorized materials, information, or study aids in any academic exercise. This includes unapproved collaboration, which occurs when a student works with others on an academic exercise without the express permission of the professor. The term academic exercise includes all forms of work submitted for credit or hours.
- (3) **Fabrication:** Unauthorized falsification or invention of any information or citation in an academic exercise.

To be clear: going online and taking information without proper citations, copying parts of other student's work, creating information for the purposes of making your paper seem more official, or anything involving taking someone else's thoughts or ideas without proper attribution is **academic misconduct**. If you work together on an assignment when it is not allowed, it is **academic misconduct**. If you have a question about an assignment, please come see me to clarify. Any cases of academic misconduct will be reported to the Office of Academic Affairs for violating the academic honesty requirements in the student handbook. They will also result in failure for the course. Remember – ignorance is NOT a defense.