Note:

Course content may be changed, term to term, without notice. The information below is provided as a guide for course selection and is not binding in any form, and should not be used to purchase course materials.
COURSE SYLLABUS
AVIA 455
TURBINE ENGINES AND JET TRANSPORTS

COURSE DESCRIPTION
This course is an in-depth study of the turbine engine theory, design and operations. The student will also receive a broad knowledge of the design and operation of turbine engines and their related systems on transport category aircraft.

RATIONALE
The purpose of this training is to provide basic information on the operation of the various aircraft turbine engine systems and their components. It is essential that a pilot has an in-depth understanding of aircraft systems for the safe completion of a flight.

I. PREREQUISITE
For information regarding prerequisites for this course, please refer to the Academic Course Catalog.

II. REQUIRED RESOURCE PURCHASE
Click on the following link to view the required resource(s) for the term in which you are registered: http://bookstore.mbsdirect.net/liberty.htm

III. ADDITIONAL MATERIALS FOR LEARNING
A. Computer with basic audio/video output equipment
B. Internet access (broadband recommended)
C. Blackboard recommended browsers
D. Microsoft Word
   (Microsoft Office is available at a special discount to Liberty University students.)
E. APA Formatting Guide:

IV. MEASURABLE LEARNING OUTCOMES
Upon successful completion of this course, the student will be able to:
A. Demonstrate a working knowledge of turbine engine theory, design and operations.
B. Analyze the development of a turbine powered aircraft and evaluate areas of potential improvement.
V. COURSE REQUIREMENTS AND ASSIGNMENTS

A. Textbook readings

B. Course Requirements Checklist

After reading the Syllabus and Student Expectations, the student will complete the related checklist found in Module/Week 1.

C. Discussion Board Forums (3)

The student is required to provide a thread in response to the provided prompt for each forum. Each thread must be 300–400 words in length and demonstrate course-related knowledge. In addition to the thread, the student is required to reply to 2 other classmates’ threads. Each reply must be 150–200 words in length.

D. Chapter Questions

After completing the required reading, each student must answer a set of questions and submit them in a Microsoft Word document.

E. Afterburner Report

The student will write a 3-page report on Afterburner Theory and operations. This assignment must be completed in APA format.

F. Research Paper

The student will submit a 7–8-page paper, in current APA format, on the history and development of a current series of jet transports. At least 5 academic resources, including but not limited to scholarly books, websites, or articles must be used.

G. Quizzes (3)

Each quiz will cover the Reading & Study material for the modules/weeks in which it is assigned. Each quiz will be open-book/open-notes, contain multiple-choice, true/false, and short answer questions, and have a 60-minute time limit.

VI. COURSE GRADING AND POLICIES

A. Points

- Course Requirement Checklist 10
- Discussion Board Forums (3 at 100 pts ea) 300
- Chapter Questions 75
- Afterburner Report 150
- Research Paper 250
- Quizzes (3 at 75 pts ea) 225

  **Total** 1010

B. Scale

A = 900–1010  B = 800–899  C = 700–799  D = 600–699  F = 0–599
D. Disability Assistance

Students with a documented disability may contact Liberty University Online’s Office of Disability Accommodation Support (ODAS) at LUOODAS@liberty.edu to make arrangements for academic accommodations. Further information can be found at www.liberty.edu/disabilitysupport.

If you have a complaint related to disability discrimination or an accommodation that was not provided, you may contact ODAS or the Office of Equity and Compliance by phone at (434) 592-4999 or by email at equityandcompliance@liberty.edu. Click to see a full copy of Liberty’s Discrimination, Harassment, and Sexual Misconduct Policy or the Student Disability Grievance Policy and Procedures.
## COURSE SCHEDULE

### AVIA 455


<table>
<thead>
<tr>
<th>MODULE/WEEK</th>
<th>READING &amp; STUDY</th>
<th>ASSIGNMENTS</th>
<th>POINTS</th>
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<tr>
<td>1</td>
<td>Crane: ch. 1</td>
<td>Course Requirements Checklist</td>
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<td>Class Introductions</td>
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<td>DB Forum 1</td>
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<td>Chapter Questions</td>
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<td>DB Forum 2</td>
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<td>Afterburner Report</td>
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**TOTAL** 1010

DB= Discussion Board

**NOTE:** Each course week (except Module/Week 1) begins on Tuesday morning at 12:00 a.m. (ET) and ends on Monday night at 11:59 p.m. (ET). The final week ends at 11:59 p.m. (ET) on Friday.