

**The University of Western Ontario**

**Commercial Aviation Management Program**

**Management and Organizational Studies 1022F  
Introduction to Aviation**

Instructor:	Dr. Suzanne Kearns	Rank:	Assistant Professor
Class Time:	Wednesdays 9:30-12:30	Location:	SSC 3024
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**COURSE OUTLINE**

**Required Text**

Study guide available at InPrint. InPrint is a not-for-profit organization owned and operated by the University Students' Council (USC). InPrint is located in room 78 of the University Community Centre (just down the hall from the Book Store).

**Optional Text**

From the Ground Up – Available through Maylan

**Prerequisite**

This course is limited to students enrolled in the Commercial Aviation Management specialization.

**Course Description**

This course is designed as an introduction to the field of aviation. Subjects to be covered include the impact of Aviation on our Society, History of Aviation, Flight Theory, Aviation Business, Human Factors, Aviation Physiology, Crew Resource Management, Air Traffic Control, Aviation Safety, and Accident Investigation. The purpose of this course is to provide persons interested in aviation a survey of Commercial Aviation.

**Goals**

- Understand the historical, social, and economic impact of aviation on society
- Understand basic aerodynamic and flight performance theory
- Develop a perspective of the aviation industry and the national airspace system in Canada
- Gain an understanding of the range of themes and issues in the Commercial Aviation Management program at the University of Western Ontario

**Evaluation Profile**

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|--------------------------------------|-----|
| 1. Class Participation               | 10% |
| 2. Article Review Presentation       | 15% |
| 3. Aviation Topic Written Assignment | 40% |
| • Written Paper                      | 30% |
| • Presentation                       | 10% |
| 4. Final Examination                 | 35% |

## Overview

1. **Class Participation:** A crucial element of this course is the sharing of ideas and opinions. Since each of us brings a unique background of experiences, much can be learned from class debate and discussion. Perfect attendance alone will not guarantee you a perfect participation grade. Your participation grade will be dependent on your *involvement* in class discussions, questioning of other student's presentations, and attendance. Participation will account for 10% of your final grade.

Absences: All absences will impact your participation grade. As a rule of thumb, you can expect each absence to subtract 10% of your participation grade. For medical absences, refer to the policy on accommodation for medical illness (<https://studentservices.uwo.ca/secure/index.cfm>). If you have a valid excuse for an absence you must inform the instructor before the intended date. It is the instructor's discretion whether or not to excuse an absence.

2. **Article Review:** You will be required to find an aviation-related article that interests you which was published in the last 12 months. Any aviation-related topic is applicable, as long as it relates to the current state of the aviation industry, and you are encouraged to find something of personal interest. You will then research background information about the content of the article, present the content of the article in a 7-10 minute presentation, and respond to the class's questions. You will have access to the computer/projector, overhead projector, blackboard, and television/VCR and are encouraged to be creative in your presentation. This review will account for 15% of your total grade. The purpose of this activity is to allow all members of the class to develop an understanding of what is currently happening in the aviation industry and gain perspective on upcoming trends. Presentations will be distributed after lectures throughout the semester. A printed copy of the presentation (if slides are used) or presentation notes must be turned in at the beginning of class on each student's presentation date.
3. **Aviation Topic Written Assignment:** Throughout the duration of this course you will be exposed to a wide range of aviation topics and issues. In the first class you will be broken up into 4 or 5 person cohorts. Your second writing assignment is to compose a 10-page paper describing an aviation topic. All members of your cohort will write independent papers, but each cohort must choose an over-arching theme. For example, your cohort may choose aviation history. Within this theme, individual members of your group may choose to write about the Wright brothers, the life of Leonardo da Vinci, the Avro Arrow, the Hindenburg, or deregulation. Other broad themes may include airlines, human factors, types of aircraft and the impact of each, aviation pioneers, aviation economics, aviation weather & meteorologists, regulating bodies (Transport Canada, FAA, ICAO, IATA, etc.), terrorism & security, etc. This is your opportunity to further explore any issue that sparked your interest throughout the course. You **must** have your topic approved by the professor. The professor will approve your topic or offer suggestions to help you clarify your ideas. This paper is expected to be in proper APA format (12 point font) with a minimum of 10 references from newspapers, magazines, websites, journals, etc. Additional instructions will be provided in class.

Presentation: Each cohort will be required to work together to present their research to the rest of the class. Presentations must be at least 25 and **not more than** 30 minutes long and will be followed by a question period. All cohort members are required to participate. The 30 minute guideline is very strict, as it is necessary to ensure that all groups have sufficient time. Be creative in your presentation. You will have access to an overhead projector, PowerPoint projector, and a television with a VCR. Presentations will account for 10% of your final grade. Printouts of presentation slides (if used) or presentation notes are due from all groups on the first day that final presentations occur.

Late Policy: Papers are expected to be handed in at the beginning of the class in which they are due. If the paper is not handed in at the beginning of class it is subject to a 10% penalty for each 24 hour period it is late, beginning at the start time of the class.

### Class Policies

- Style: Make sure you use proper grammar, spelling, and punctuation in your presentation and executive summary. Remember to follow APA guidelines when formatting your references page.
- Late Policy: All papers and presentation overviews are due at the beginning of the class period in the week in which they are due. Even if your group is not presenting that week,

your presentation overview is due. This creates a fair environment where the first presenters are not disadvantaged by not seeing others go first. Papers will be considered late if they have not been turned in within the first 15 minutes of class. Late papers and presentation overviews are subject to a 10% grade penalty per day.

- **Plagiarism:** Students must write their papers and assignments in their own words. Whenever students take an idea, or a passage from another author, they must acknowledge their debt both by using quotation marks where appropriate and by proper referencing such as footnotes or citations. Plagiarism is a major academic offence.
  - **Scholastic Offences:** Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site: <http://www.uwo.ca/univsec/handbook/appeals/scholoff.pdf>.
  - **Plagiarism Checking:** All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (<http://www.turnitin.com>).
4. **Final Examination:** A comprehensive final examination will be given at the end of the semester. Final exam review will be given prior to the exam. The final exam will cover all information in the course, including readings, lectures, videos, examples, etc. Therefore it is crucial that you take good notes throughout the term. The exam format may include multiple choice, fill-in-the-blanks, short answer, and/or essay questions. Computer-marked multiple-choice tests and/or exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.

## **Lecture Outline and Required Reading**

### **Week 1**

#### **Course Introduction**

##### **The Impact of Air Transportation on Society**

Kane, R. (1998). The Importance of Air Transportation. In R. Kane, *Air Transportation* (13<sup>th</sup> Ed), (pp. 3-28). Iowa: Kendall/Hunt Publishing Company.

### **Week 2**

#### **Historical Aeronautical Pursuits**

Kane, R. (1998). Man's Efforts to Fly & Development of the Airplane. In R. Kane, *Air Transportation* (13<sup>th</sup> Ed), (pp. 29-92). Iowa: Kendall/Hunt Publishing Company.

### **Week 3**

#### **Air Traffic Control**

##### *Article Review Presentations Begin*

Brenlove, M. S. (2003). Controller positions: Where are they? In M. S. Brenlove, *The Air Traffic System: A Commonsense Guide*, (pp. 3-30). Ames, Iowa: Iowa State Press.

Brenlove, M. S. (2003). Radio communications: How do you hear me? In M. S. Brenlove, *The Air Traffic System: A Commonsense Guide*, (pp. 31-41). Ames, Iowa: Iowa State Press

### **Week 4**

#### **Aircraft Safety**

Wells, A.T. (2004). Review of Safety Statistics. In A. T. Wells, *Commercial Aviation Safety* (pp. 101-132). New York, NY: McGraw-Hill.

Wells, A.T. (2004). Accident Causation Models. In A. T. Wells, *Commercial Aviation Safety* (pp. 133-156). New York, NY: McGraw-Hill.

### **Week 5**

#### **Accident Investigation**

Walters, J. M. & Sumwalt, R. L. III (2000). El Deluvio claims American 965. In J. M. Walters & R. L. Sumwalt III, *Aircraft Accident Analysis: Final Reports*, (pp 51-73). New York: McGraw-Hill.

Walters, J. M. & Sumwalt, R. L. III (2000). Shattered dreams: A record-setting flight gone awry. In J. M. Walters & R. L. Sumwalt III, *Aircraft Accident Analysis: Final Reports*, (pp 337-350). New York: McGraw-Hill.

### **Week 6**

#### **Flight Physiology**

Reinhart, R. O. (1996). Altitude physiology. In R. O. Reinhart, *Basic Flight Physiology*, (pp. 47-79). New York: McGraw-Hill.

Reinhart, R. O. (1996). Self-imposed medical stress. In R. O. Reinhart, *Basic Flight Physiology*, (pp. 144-168). New York: McGraw-Hill.

### **Week 7**

#### **Crew Resource Management**

Jensen, R. S. (1995). Crew resource management. In R. Jensen, *Pilot Judgement and Crew Resource Management*, (pp. 115-149). Burlington: Ashgate.

### **Week 8**

#### **Aviation Psychology & Single-Pilot Resource Management**

Endsley, M. R. (1999). Situation awareness in aviation systems. In D. J. Garland, J. A. Wise, & V. D. Hopkin, *Handbook of Aviation Human Factors*, (pp. 257-276). Mahwah, New Jersey: Lawrence Erlbaum Associates.

O'Hare, D. (2003). Aeronautical decision making: Metaphors, models, and methods. In P.S. Tsang & M.A. Vidulich, *Principles and Practice of Aviation Psychology*, (pp. 201-237). Mahwah, New Jersey: Lawrence Erlbaum Associates.

## **Week 9**

### **Aircrew Security**

#### *Article Review Presentations End*

Williams, C., & Waltrip, S. (2004). Aviation security: Crewmember perspectives. In C. Williams & S. Waltrip, *Aircrew Security*, (pp. 3-30). Burlington, VT: Ashgate.

Williams, C., & Waltrip, S. (2004). Disruptive passengers and sky rage. In C. Williams & S. Waltrip, *Aircrew Security*, (pp. 31-68). Burlington, VT: Ashgate.

## **Week 10**

### **Flight Theory**

Dole, C. (1981). Introduction. In C. Dole, *Flight Theory and Aerodynamics*, (pp. 1-14). New York: John Wiley & Sons.

## **Week 11**

### **Aviation Business**

#### *Papers Due*

Guest Lecturer – *Captain Brian Morris*

Overview of Airline Structure

Marketing

Sales

Flight Operations

In-flight Service

Systems Operation Control

Flight Safety

Maintenance

## **Week 12**

**Presentation Slides Due from ALL Groups**

**Group Presentations, Class Critique**

## **Week 13**

**Group Presentations, Final Examination Review**