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# MOS 3305A

## HUMAN FACTORS IN AVIATION

### Fall 2019

## Course Outline

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### 1. Course Information:

#### 1.1 Class Location and Time:

SSC-3014  
Mondays 3:30 pm – 6:30 pm

#### 1.2 Contact Information:

Instructor: Dr. Jonathan Histon  
Office: SSC 4434  
Office Hours: Mondays 10:30-11:15 or by appointment (preferred)  
Phone: n/a, please use email  
Email: [jhiston@uwo.ca](mailto:jhiston@uwo.ca)

DAN Department of Management & Organizational Studies strives at all times to provide accessibility to all faculty, staff, students and visitors in a way that respects the dignity and independence of people with disabilities. Please contact the course instructor if you require material in an alternate format or if you require any other arrangements to make this course more accessible to you. You may also wish to contact Services for Students with Disabilities (SSD) at 519-661-2147 for any specific question regarding an accommodation. More information about "Accessibility at Western" is available at: <http://accessibility.uwo.ca>

### 2. Calendar Description

#### 2.1 Course Description:

Psychology and physiology as they relate to human performance in a complex operating environment. Topics include pilot decision-making and crew resource management, interpersonal relations, effects of noise and vibration, pressure change, balance, motion sickness, jet lag, human factors in aircraft accidents

3 lecture hours, 0.5 course

Antirequisite(s): N/A

Prerequisite(s): Enrollment in 3rd or 4th year of the Commercial Aviation Management module of BMOS or Geography and Commercial Aviation Management module.

## 2.2 Senate Regulations

Senate Regulations state, “unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you will be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.”

This regulation is in regards to the COURSES required. Students not in BMOS are permitted to enroll in up to 1.0 MOS courses, per the Academic Timetable.

## 3. Textbook

### Required

Lee, J. et al., Designing for People: An Introduction To Human Factors Engineering, Createspace

Casey, S. (2006) The Atomic Chef and other true tales of design, technology, and human error. Santa Barbara CA: Aegean Publishing Company.

Course Website: Instructional and reference material will be posted, or linked, on the course website. You can log onto the course website by visiting [webct.uwo.ca](http://webct.uwo.ca) with a valid student number and password.

## 4. Course Objectives and Format

The DAN Department of Management and Organizational Studies as a whole draws upon an evidence-based management approach. Evidence-based management is the systematic process of gathering evidence from multiple sources, critically appraising the evidence, and using that evidence in making and evaluating management decisions to improve organizational performance.

### 4.1 Course objectives

This course is designed for those students who have a keen interest in aviation human factors. The course focus is on the role engineering psychology research plays in the assessment of human performance in simple and complex cognitive tasks, and the design of information displays and controls that support those tasks. Through readings, written assignments, and class discussions, students will explore the relationships between various components of human information processing and the impact those relationships have on the performance of aviation and everyday cognitive-based tasks. By the end of the course, the students should have a good understanding of the basic theories, principles, and research that contribute to the field of cognitive ergonomics.

### 4.2 Course format

The course will be organized as a combination of lecture, group discussion, group activities, and student presentations

## 5. Evaluation

**I. Interactivity (20%):** 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. Your interactivity grade will depend on involvement in on-line and in-class discussions / activities, questioning of student presentations, and random in-class quizzes.

*Important Information Re: Absences:* All absences will impact your interactivity grade. As a rule of thumb, you can expect each absence to subtract 10% of your interactivity grade (roughly 2% of your grade in the course). 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.

*Course readings:* It is expected that all students will have completed their assigned course readings before attending each lecture. This is important as it provides an enhanced understanding of the course material and students will be prepared to ask questions in class.

**II. Human Factors Researcher Profile (20%):** The 'Human Factors Researcher' profile assignment is intended to be done online through OWL with a significant portion completed in the early part of the term. Students will be required to pick a Human Factors researcher of interest to them (from any aspect of aviation) and create a profile. More details provided in-class.

**III. Expert Panel (20%):** Each week, a group will have a chance to analyze a case/report and lead a discussion on the case/report for the class. You will work in small groups to complete this assignment at various times during the term. The goal of the assignment is to offer an opportunity to practice making a business presentation as well as to become highly familiar with a particular case/report. Additional details will be provided in class.

*Course assignments and late policy:* Assignments are due at the assigned time, which may be at the beginning of the class period. Students who turn in their assignment after deadline will be subject to a minimum 15% late penalty. Additional late penalties will be incurred for each 24 hour period that the assignment is late, as specified in each assignment description. Unless arrangements are made at least 72 hours prior to a due date, there will be no exceptions to this policy. Students are expected to arrange their time so they are robust to the known challenges associated with completing assignments (power outages, network difficulties, etc...)

**IV. Final Exam (40%):** A comprehensive final examination will be given during the final exam period. The final exam will cover all information in the course, including readings, lectures, videos, examples, guest speakers 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.

At the discretion of the instructor, a passing mark in the course requires:

- a passing mark on the final exam (IV)
- AND passing marks on 2 of the 3 individual components (I, II, IV)

independent of your score given by the above grade composition

**Electronic devices of any kind (including pagers, cell phones, smart watches and calculators) are NOT permitted at exams.**

#### **Important Notes:**

The exam will be scheduled for 3 hours. No programmable pieces of technology are permitted in the exam. If you are found in possession of a piece of technology (cell phone, smart watch, etc) this will be considered an academic violation, If you are unsure, please ask your professor to check your device.

Students are responsible for material covered in the lectures as well as the assigned chapters/sections in the text. The examination will be held in the final exam period. Exams will not be returned to students but may be reviewed in the instructor's office.

Students are **REQUIRED TO COMPLETE ALL COMPONENTS** of this course. There are no exceptions to this. Extra assignments to improve grades **will NOT** be allowed.

Exams may be scored using the program Scan Exam (or similar) which examines the answer sheets for unusual coincidences in the pattern of answers given which may be indicative and used as supporting evidence of cheating.

**Grades will not be adjusted on the basis of need. It is important to monitor your performance in the course. Remember: *You* are responsible for your grades in this course.**

The DAN Department has a grade policy which states that for courses in the 3000 range, the class average must fall between 70% and 77% for all sections of a course taught by the same instructor. In very exceptional circumstances only, class averages outside this range may be approved by the Undergraduate Chair or Chair. Class averages are not grounds for appeal.

## 6. Lecture and Examination Schedule

“See Schedule on OWL”

## 7. Student Responsibilities

For Students should familiarize themselves with Western University Senate Regulations, please see: [http://www.uwo.ca/univsec/academic\\_policies/index.html](http://www.uwo.ca/univsec/academic_policies/index.html).

Material covered in lectures will not always be the same as material covered in the textbook. These two sources should be viewed as complimentary and not redundant. Please note that the instructor will not guarantee to provide copies of lectures notes or examples provided in class. Therefore, if you miss a lecture, you should try to obtain this material from another student.

### 7.1 Respect

Please act respectfully towards the classroom, the Professor and your fellow students. Acting respectfully means arriving on time, turning off phones, avoiding private discussions during lectures, refraining from viewing non-course material on your laptops, and cleaning up after yourself. Acting respectfully provides a better learning experience for everyone.

Private in-class discussions are distracting to students and the Professor. If other students are distracting your attention from the material, you should ask them to be quiet. If you feel uncomfortable doing this (or the problem persists), please see the instructor.

Late arrivals are also distracting. Please arrive on time for classes.

### 7.2 No Recording of Classes

Students are not permitted to record any portion of a class, audio or video, without the prior written permission of the professor.

### 7.3 Copyright Notice

Lectures and course materials, including power point presentations, outlines, and similar materials, are protected by copyright. You may take notes and make copies of course materials for your own educational use. You may not record lectures, reproduce (or allow others to reproduce), post or distribute lecture notes, wiki material, and other course materials publicly and/or for commercial purposes without my written consent. This includes but is not limited to sites such as “coursehero” or similar.

## 8. Exam Policies

- Bring student identification to exams.
- Nothing is to be on/at one's desk during an exam except a pencil, an eraser, and the individual's student card.
- Do not bring music players, cell phones, or other electronic devices to exams.

## 9. E-mail Policies

The following policies apply to all emails between students and the Professor. Please respect the fact that the Professor receives hundreds of emails from students and must deal with those emails in a fair and organized manner. Unacceptable emails will receive a reply saying only "Please see Email Policies on the course outline".

### 9.1 UWO.CA Email Addresses Only

For privacy reasons, students must use their Western email accounts to contact the Professor. The Professor will not respond to emails from non-uwo.ca addresses (e.g. hotmail.com, gmail.com, etc.).

### 9.2 Subject Line Must Include Course and Section Number

The subject line of emails must contain the name or number of the course, and the section number in which the student is enrolled. The Professor teaches different courses and sections and cannot properly respond to questions if he does not know which course or section you are enrolled in.

### 9.3 Acceptable Emails

- questions about the course content or materials
- asking to set up an appointment to ask questions or review an exam
- notification of illness or other special circumstances
- providing constructive comments or feedback about the course

### 9.4 Unacceptable Emails

- questions that may be answered on OWL or on this course outline
- asking when grades will be posted
- asking what grade a student received
- asking where or when an exam is scheduled or the material covered on an exam
- requests for grade increases, extra assignments, or reweighting of course components

## 10. Attendance

It is expected that students will attend all classes. The professor does not guarantee to provide access to lecture notes. Students are encouraged to obtain missed lecture notes from a fellow student.

### 10.1 Short Absences.

If you miss a class due to minor illness or other problems, check your course outlines for information regarding attendance requirements and make sure you are not missing a test or exam. Cover any readings and arrange to borrow the missed lectures notes from a classmate.

### 10.2 Extended Absences.

If you are absent more than approximately two weeks or if you get too far behind to catch up, you should consider reducing your workload by dropping one or more courses. The Academic Counsellors can help you to consider the alternatives. At your request, they can also keep your instructors informed about your difficulties.

## 11. Grade Fairness

Fairness requires that all students be treated equally and be evaluated using the criteria set out in this course outline. The evaluation criteria are based on actual achievement and not on how hard a student has tried.

Claims by students of an excellent academic history, good attendance record, need to obtain or maintain a scholarship, desire to be admitted to Ivey or graduate school, or other personal issues, cannot be used to justify a higher grade in the course or a reweighting of course components. **There is no extra work or**

assignments available for extra credit or to “make up” for a course component that was missed or performed poorly.

## 12. Posting of Grades

Non-exam grades will be posted on OWL once the grades are available. Final exam grades and final course grades are not posted on OWL and are available once they have been posted by the Registrar under “Academic Summary” at the Student Centre website.

## 13. University Policy Regarding Illness

### 13.1 Illness

For details on University Policy and student responsibilities go to:

[https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/Academic\\_Consideration\\_for\\_absences.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic_Consideration_for_absences.pdf)

Students who experience an extenuating circumstance (illness, injury, or other extenuating circumstance) sufficiently significant to temporarily render them unable to meet academic requirements may submit a request for academic consideration through the following routes:

- i. Submitting a Self-Reported Absence form provided that the conditions for submission are met (maximum of 2 from September to April, valid for 48 hours or less, on course work worth less than or equal to 30%); or
- ii. For medical absences, submitting a Student Medical Certificate (SMC) : [https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/medicalform.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf) signed by a licensed medical or mental health practitioner in order to be eligible for Academic Consideration; or
- iii. For non-medical absences, submitting appropriate documentation (e.g., obituary, police report, accident report, court order, etc.) to Academic Counselling in order to be eligible for academic consideration. Students are encouraged to contact their Academic Counselling unit to clarify what documentation is appropriate.

Students seeking academic consideration:

- are advised to **consider carefully the implications** of postponing tests or midterm exams or delaying handing in work;
- are encouraged to make appropriate decisions based on their specific circumstances, recognizing that minor ailments (upset stomach) or upsets (argument with a friend) are not an appropriate basis for a self-reported absence;
- **must communicate with their instructors no later than 24 hours** after the end of the period covered by either the self-reported absence or SMC, or immediately upon their return following a documented absence.

### 13.2 Make Up Examinations / Assignments

The student must write a make-up exam if the regularly scheduled exam is missed for reasons for which adequate documentation is received by the instructor (this documentation must be supplied by the Academic Counseling office).

The date and time of the make-up examination will be set by the instructor, who will communicate the date to the student.

If a student is unable to meet the scheduled make-up as agreed, then the student is responsible for obtaining new accommodations from Academic Counselling, and seeking a new make-up date with the instructor within a reasonable time frame.

Assignments which are missed for reasons for which adequate documentation is received by the instructor (this documentation must be supplied by the Academic Counseling office) and which are impractical to reschedule (e.g. case presentations or similar) will be handled through a substitute activity at the sole discretion of the instructor and will likely require significant research and writing.

## 14. University Policy on Cheating and Academic Misconduct

Students are responsible for understanding the nature of and avoiding the occurrence of plagiarism and other academic offenses. Students are urged to read the section on Scholastic Offenses in the Academic Calendar. Note that such offenses include plagiarism, cheating on an examination, submitting false or fraudulent assignments or credentials, impersonating a candidate, or submitting for credit in any course without the knowledge and approval of the instructor to whom it is submitted, any academic work for which credit has previously been obtained or is being sought in another course in the University or elsewhere. If you are in doubt about whether what you are doing is inappropriate, consult your instructor. A claim that "you didn't know it was wrong" will not be accepted as an excuse.

A copy of guidelines about how to avoid cheating can be obtained from the office of the Ombudsperson, Room 3135 WSSB, (519) 661-3573, ombuds@uwo.ca.

Cheating on exams will not be tolerated; students are referred to the university policy on scholastic offenses. Looking at the test of another student, allowing another student to view your exam, or obtaining information about a test in advance are all examples of cheating.

Students found cheating will receive a zero (0%) on that exam. A number of safeguards will be employed to discourage cheating. For example, examination supervisors (proctors) of the tests may ask students to move to another seat during the exam, cover their paper, avert their eyes from other students' papers, remove baseball caps, etc. This is not meant as a personal affront nor as an accusation of cheating, rather as vigilant attempts at proctoring.

The penalties for a student guilty of a scholastic offense include refusal of a passing grade in the assignment, refusal of a passing grade in the course, suspension from the University, and expulsion from the University.

## 15. Procedures For Appealing Academic Evaluations

1. In the first instance, all appeals of a grade must be made to the course instructor (informal consultation).
2. If the student is not satisfied with the decision of the course instructor, a written appeal must be sent to the Undergraduate Chair: Student Affairs of the Department of Management and Organizational Studies.
3. If the response of the Undergraduate Chair is considered unsatisfactory to the student, he/she may then appeal to the Dean of the Faculty in which the course of program was taken.
4. Only after receiving a final decision from the Dean may a student appeal to the Senate Review Board Academic. A Guide to Appeals is available from the Ombudsperson's Office.

## 16. Support Services

### 16.1 Support Services

The Registrar's office can be accessed for Student Support Services at <http://www.registrar.uwo.ca> Student Support Services (**including the services provided by the USC listed here**) can be reached at: <http://westernusc.ca/services/>

Student Development Services can be reached at: <http://www.sdc.uwo.ca/>

Students who are in emotional/mental distress should refer to Mental Health@Western [http://www.health.uwo.ca/mental\\_health/](http://www.health.uwo.ca/mental_health/) for a complete list of options about how to obtain help.

**16.2 Academic Concerns.**

If you are in academic difficulty, it is strongly recommended that you see your academic counsellor.