



WRIGHT STATE UNIVERSITY

Aviation Science and Technology Associate of Applied
Science program and course catalog with syllabi

Wright State University

Aviation Science and Technology Associate of Applied Science (AAS) degree

This document contains:

1. Program description, admission requirements, objectives, and outcomes
2. Program of Study (60 credit hours)
3. Syllabi for the following identified required courses from the program of study:
 - a. AVI 2000 Introduction to Aviation (3 credit hours, new course)
 - b. AVI 2001 Private Pilot Ground School (3 credit hours)
 - c. AVI 2002 Private Pilot Flight Lab (1 credit hour)
 - d. AVI 2004 Private Pilot Flight Lab 2 (1 credit hour, new course)
 - e. AVI 2010 Air Traffic Control Basics (3 credit hours, new course)
 - f. AVI 2101 Instrument Rating Ground School (3 credit hours, new course)
 - g. AVI 2102 Instrument Rating Flight Lab (1 credit hour, new course)
 - h. AVI 2250 Aircraft Systems and Powerplants (3 credit hours, new course)
 - i. GEO 4000 Climate Meteorology (3 credit hours)
 - j. ENG 1100 Academic Writing and Reading (3 credit hours)
 - k. AVI 2201 Commercial Pilot Ground School 1 (2 credit hours, new course)
 - l. AVI 2202 Commercial Pilot Flight Lab 1 (1 credit hour, new course)
 - m. AVI 2350 Aviation Safety and Accident Investigation (3 credit hours, new course)
 - n. PSY 1010 Introduction to Psychology (4 credit hours)
 - o. ENG 2100 Research, Writing, and Argumentation (3 credit hours)
 - p. AVI 2301 Commercial Pilot Ground School 2 (3 credit hours, new course)
 - q. AVI 2302 Commercial Pilot Flight Lab 2 (1 credit hour, new course)
 - r. AVI 2375 Aviation Law and Regulations (3 credit hours, new course)
 - s. PSY 3680 Aviation Human Factors (3 credit hours, new course)
 - t. PHY 1903 Physics of Flight (3 credit hours, new course)

Program description: The Aviation Science and Technology Associates of Applied Science program provides students with an education in aviation that prepares professional pilots who will be able to operate effectively within National and International Airspace Systems in the 21st century. This program prepares students for entry-level technical positions in the aviation industry. Students entering this program should have a strong desire to excel in aviation and acquire the skill sets of a professional pilot. This program is designed to accommodate students entering the program with or without previous flight experience and those students transferring from other universities. Graduates will be able to pursue entry-level careers that require an aviation-related degree flying single engine planes in areas such as: law enforcement, corporate or charter operations, cargo and passenger airlines, government contractors, survey pilots, and search and rescue operations.

Admission Requirements: Successful completion of first semester courses (AVI2000, AVI2001, AVI2002, AVI2004, and AVI2010), GPA of 2.5 or better, obtain class 1 medical certificate, interview with First Flight check instructors and administration. Must be a United States citizen.

Program Learning Objectives: Students enrolled in the Aviation Science and Technology Associate of Applied Science program will learn to:

1. Develop the skills to successfully adapt to regulatory policies, procedures, and evolving technologies in a dynamic fast paced operational environment.
2. Analyze and interpret data for problem-solving in ground and flight operations.
3. Identify modern-day challenges that affect the aviation industry.
4. Become proficient in flight navigation through dead reckoning, pilotage, and aircraft instrumentation.
5. Utilize modern technology to effectively manage professional flight operations.

Program learning outcomes: As a result of their learning experience, graduates of the Aviation Science and Technology Associate of Applied Science program can:

1. Demonstrate the skills to successfully adapt to regulatory policies, procedures, and evolving technologies in a dynamic fast paced operational environment.
2. Analyze and interpret data for problem-solving in ground and flight operations.
3. Identify modern-day challenges that affect the aviation industry.
4. Become proficient in flight navigation through dead reckoning, pilotage, and aircraft instrumentation.
5. Utilize modern technology to effectively manage professional flight operations.



Academic Program of Study

College:	Health, Education, and Human Services
Department:	Kinesiology and Health
Degree (A.A. B.S., B.F.A., etc.) & Title:	Aviation Science and Technology AAS
Concentration, Track, Option, Specialization:	
Minor Program Title:	
Certificate Program Title:	

Program	Hours
I. Wright State Core	
Element 1: Communication	
ENG 1100 Academic Reading and Writing	3
ENG 2100 Research, Writing, and Argumentation	3
Element 2: Mathematics	3
Element 5: Social Sciences	
PSY 1010 Introduction to Psychology (IW, MC)	4
Element 6: Natural Sciences	
PHY 1903 Physics of Flight	3
Additional Core	
	16
II. Required Courses	
AVI 2000 Introduction to Aviation and Aviation Systems	3
AVI 2001 Private Pilot Ground School	3
AVI 2002 Private Pilot Flight Lab 1	1
AVI 2004 Private Pilot Flight Lab 2	1
AVI 2010 Air Traffic Control Basics	3
AVI 2101 Instrument Rating Ground School	3
AVI 2102 Instrument Rating Flight Lab	1
AVI 2201 Commercial Pilot Ground School 1	2
AVI 2202 Commercial Pilot Flight Lab 1	1
AVI 2250 Aircraft Systems and Powerplants	3
AVI 2301 Commercial Pilot Ground School 2	3
AVI 2302 Commercial Pilot Flight Lab 2	1
AVI 2350 Aviation Safety and Accident Investigation (IW)	3
AVI 2375 Aviation Law and Regulations (IW)	3
GEO 4000 Climate Meteorology	3
PSY 3680 Aviation Human Factors	3
	37
III. Elective Courses	
	7
Total:	60

Notes:

Date of this Action:

**Introduction to Aviation
Wright State University
Department of Kinesiology and Health
AVI 2000**

Instructor Information

Name - Click or tap here to enter text.

Contact Information – Please text or e-mail questions first if possible

EMAIL: Click or tap here to enter text.

PHONE:

OFFICE HOURS: Click or tap here to enter text.

Course Information

Course Meeting Details - First Flight Aviation Classroom, Dayton-Wright Brothers airport, Tuesday / Thursday 12:40 – 14:00

Schedule Type Face to Face (F2F), Lecture, Field Experience, Discussion

Course Catalog Description - Introduction to aviation systems and careers: airlines, business, freight, flight test, and military flight operations. Introduces aviation systems including aircraft, airports, airspace, and regulatory environment for the broad range of aviation activities.

Course Description

Stage I - Basic History of aviation/aerospace: Overview of aviation history, general aviation, military aviation, and commercial aviation, Students will learn how different types of air aircraft were developed, and the importance of the air transportation industry as well as the importance of military air dominance in both peace time as well as the theater of war. (3 weeks)

Stage II - Basic Flight Mechanics: Students will study the basic physical principles of airplane aerodynamics, aircraft performance, stability, and controlled flight, of fixed-wing aircraft.

Stage III - This course will introduce the student to operations and quality of life issues related to working in the aviation environment. The material is not limited to one specific area of professional pilot's career but will seek to cover far reaching issues and provide the student with a wide perspective of what to expect as a professional pilot.

Credit Hours – 3 Hours

Repeatable for Credit? No

Prerequisite Course(s) - None

Corequisite Course(s) - None

Enrollment Restriction(s) - None

Course Attributes – This course is a competency based educational program

Course Learning Objectives – Students enrolled in this course will learn to:


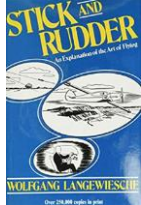
- Demonstrate knowledge of Aviation history.
- Identify basic aerodynamics and flight mechanics.
- Identify opportunities and responsibilities of multiple careers in the aviation/aerospace fields.

Course Learning Outcomes – Students successfully completing this course can:

- Demonstrate knowledge of Aviation history.
- Identify basic aerodynamics and flight mechanics.
- Identify opportunities and responsibilities of multiple careers in the aviation/aerospace fields.

Course Materials

Required Textbooks

<p>Title: Everything Explained for the Professional Pilot ISBN: 978-0974261300 Author: Richie Lengel Publisher: Everything Edition: 13</p>	
<p>Title: Stick and Rudder: An Explanation of the Art of Flying ISBN: 978-0070362406 Author: Wolfgang Langewiesche Publisher: McGraw Hill Edition: 1</p>	

Evaluation of Students

Course Assignments –

Date	Subject	Percentage
Week 4	Stage 1 Exam	20%
Week 10	Stage 2 Exam	20%
Week 15	Stage 3 Final Exam	20%
Weeks 4, 10, 15	Stage Projects	20%
Ongoing	Participation and Group Assignments	20%

Grading System - Standard traditional letter grades (A, B, C, D, F)

Grading Scale

A = 90% - 100% B = 80% - 89% C = 70% - 79% D = 60% - 69% F ≤ 59%

Course Content, Weekly Course Outline and Activities

Week	Topic	Reading and Assignments
Week 1 Stage 1	DAY 1 Course Briefing and Aviation History (Pre- 1300s) DAY 2 Aviation History (1300 to 1700)	Jepp Chapter 2A, 3
Week 2	DAY 1 Aviation History (1700 to 1900) DAY 2 Aviation History (1900s) *Wright Brothers Museum	Stage 1 Project Assignment
Week 3	DAY 1 Aviation History (Post 1900 to Present day) DAY 2 Aviation History (Future of aviation/aerospace)	Stage 1 Project Assignment
Week 4	DAY 1 * Stage 1 Project Evaluation DAY 2 Stage 1 EXAM	
Week 5 Stage 2	DAY 1 Flight Mechanics (Forces of Flight) DAY 2 Flight Mechanics (Basic Fluid Dynamics and Newtonian Physics)	
Week 6	DAY 1 Flight Mechanics (Atmospheric properties) DAY 2 Flight Mechanics (Atmospheric effects)	
Week 7	DAY 1 Flight Mechanics (Stability) * US Air Force Museum Trip	

Week	Topic	Reading and Assignments
	DAY 2 Flight Mechanics (Weight Shift Effects)	
Week 8	DAY 1 Flight Mechanics (Primary flight controls) DAY 2 Flight Mechanics	Stage 2 Project Assignment
Week 9	DAY 1 Flight Mechanics (Trim and Flaps) DAY 2 Flight Mechanics (Stalls and Emergencies)	
Week 10	DAY 1 * Stage 2 Project Evaluation DAY 2 Stage 2 EXAM	
Week 11 Stage 3	DAY 1 Guest Speaker Prep and Discussion DAY 2 Guest Speaker	
Week 12	DAY 1 Guest Speaker Prep and Discussion DAY 2 Guest Speaker	Stage 3 Project Assignment
Week 13	DAY 1 Guest Speaker Prep and Discussion DAY 2 Guest Speaker	
Week 14	DAY 1 * Stage 3 Project Evaluation DAY 2 Guest Speaker	
Week 15	Course FINAL Exam	

Disclaimer: "Course schedule, topics, evaluation and assignments may be changed at the instructor's discretion."

"*" denotes classes that may meet outside of prescribed location and/or times

Course Policies and Resources

Attendance is mandatory per the Federal Aviation Administration and Training Course Outline. If the student cannot attend class (excused or unexcused), it is the student's responsibility to meet with the primary instructor to make up the lesson. If students cannot meet with the primary instructor during office hours or by appointment, an additional flight instructor from First Flight Aviation can be used to cover the missed lesson(s) for a fee of \$45/hr. In the event lessons cannot be completed before the beginning of the next stage, the student will be unable to continue ground and/or flight training until the requirements of the previous stage are met. Failure to complete missed lessons within 1 week after the end of stage will result in a meeting with either the Primary Instructor, Chief Flight Instructor, or Program Director to discuss continuation or the possible removal from the flight program.

In order to complete various stages of flight and ground training, a written endorsement must be provided by a Certified Flight Instructor. The nature of that endorsement requires that the instructor is

confident the student can pass that stage of training (FAA Written, Solo Flight, Check Ride, etc). **The Flight Instructor reserves the right to withhold their endorsement for any reason.**

Program or College Policies and Resources

Students are expected to comply with the ethical standards of both Wright State University and First Flight Aviation. Improper language and behavior in class or at the airport can be grounds for separation from the program. As pilots, we are expected to maintain a level of decorum appropriate to our positions and responsibilities.

Students are required to complete this course with a grade of C or better in order to enroll in the Instrument Ground and Flight Program.

University Policies and Resources

Disability Services <http://www.wright.edu/disability-services>.

Students registered with the Office of Disability Services who require special accommodations for lecture, lab, testing, or to complete the requirements of this class, should contact the instructor as soon as possible so arrangements can be made. Additional help and information is available at Office of Disabilities Services (Dayton Campus) or Academic Instructional Services (Lake Campus)

Academic Integrity <http://www.wright.edu/students/judicial/academic-integrity-student-guide.pdf>

It is the policy of Wright State University to uphold and support standards of personal honesty and integrity for all students consistent with the goals of a community of scholars and students seeking knowledge and truth. Furthermore, it is the policy of the university to enforce these standards through fair and objective procedures governing instances of alleged dishonesty, cheating, and other academic misconduct.

Diversity Statement

Wright State University promotes the acceptance and appreciation of every individual regardless of race, gender, age, ethnicity, ability or disability, sexual orientation, socio-economic status, religious affiliation, or national origin. We encourage appropriate activities and events which foster learning about the diversity of our world.

Non-Discrimination

Wright State University does not discriminate on the basis of race, color, religion, age, national origin, national ancestry, sex, pregnancy, gender, gender identity or expression, sexual orientation, military service or veteran status, mental or physical disability, or genetic information in employment, admission, treatment, or access to its programs or activities.

Wright State University adheres to all applicable state and federal equal opportunity /affirmative action statutes and regulations.

The Office of Equity and Inclusion (OEI)

The OEI exists to provide an inclusive, equitable, working, living, and learning environment for members of the Wright State University community. OEI is responsible for compliance with federal and state law as well as University policy regarding equity and equal employment opportunity in personnel matters and

university issues of harassment and discrimination, including relationship violence and sexual misconduct. Specifically, OEI is tasked with investigating and resolving complaints related to violations of the University Non-Discrimination Statement as well as the Gender Based Harassment and Violence Policy. All members of the WSU community, guests, and visitors are protected by these policies regardless of their sexual orientation, gender identity, or gender expression. For more information, please visit www.wright.edu/oei.

Sex/Gender-Based Harassment

Wright State University is committed to maintaining a safe and healthy educational and work environment in which no member of the university community is, on the basis of actual or perceived sex, gender, gender identity, gender expression and or sexual orientation, excluded from participation in, denied the benefits of, or subjected to discrimination in any university program or activity. Wright State University does not discriminate on the basis of sex or gender in its education programs and activities. Sex/Gender-based harassment and violence, including sexual violence, are forms of sex discrimination in that they deny or limit an individual's ability to participate in or benefit from university programs or activities.

**Private Pilot Ground School
Wright State University
Department of Kinesiology and Health
AVI 2001**

Instructor Information

Name - Click or tap here to enter text.

Contact Information

EMAIL: Click or tap here to enter text.

OFFICE: Click or tap here to enter text.

OFFICE HOURS: Click or tap here to enter text.

Course Information

Course Meeting Details – First Flight Aviation Classroom, Dayton-Wright Brothers airport, Tuesday / Thursday 10:00 – 11:20

Schedule Type – Face to Face (F2F), Lecture, Discussion

Additional Course Requirements

- Minimum age 17 years old
- English proficient
- Minimum FAA 3rd Class Medical Certificate
- Corequisite course with AVI 2002A Private Pilot Flight Lab 1

Course Catalogue Description – The study of flight fundamentals, systems, weather, human factors, and regulations required for a Private Pilot Certificate. Must be a United States citizen. Minimum age of 17 years old.

Course Description – AVI 2001 Private Pilot Ground will introduce the student to flight training in a single engine aircraft and prepare them for their FAA Private Pilot Written Exam. Lectures will cover the knowledge portion of flight training, including regulations, human factors, aerodynamics, flight controls, cross country flight planning and aircraft systems. The course is designed to encourage discussion and interaction as well as prepare the student for a seamless transition into the cockpit.

Credit Hours – 3 Credit Hours

Repeatable for Credit? No

Prerequisite Course(s) – None

Corequisite Course(s) – AVI 2002A Private Pilot Flight Lab 1

Enrollment Restriction(s) – International students prohibited at this time, Department Approval Required

Course Learning Objectives – Students enrolled in this course will learn to:

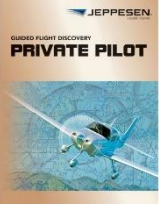

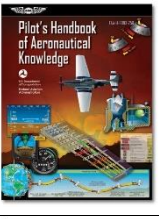


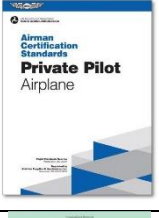
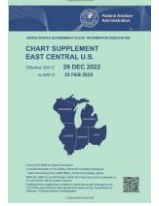
- Explain the aerodynamics, legal regulations, weather forecasting, airport environment, and the biological and psychological hazards of human factors as they relate to a Private Pilot according to the Airman Certification Standards created by the Federal Aviation Administration (FAA).
- Create accurate, usable cross-country flight plans using knowledge of airspace, regulations, pilotage, dead reckoning and electronic navigation.
- Identify the equipment, inspections and airworthiness requirements of an aircraft as mandated by Federal Aviation Regulations.


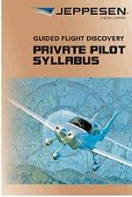
Course Learning Outcomes – As a result of their learning experience, students successfully completing this course can:

- Explain the aerodynamics, legal regulations, weather forecasting, airport environment, and the biological and psychological hazards of human factors as they relate to a Private Pilot according to the Airman Certification Standards created by the Federal Aviation Administration (FAA).
- Create accurate, usable cross-country flight plans using knowledge of airspace, regulations, pilotage, dead reckoning and electronic navigation.
- Identify the equipment, inspections and airworthiness requirements of an aircraft as mandated by Federal Aviation Regulations.

Course Materials






- Required Materials**

<p>Title: Guided Flight Discovery: Private Pilot ISBN: 978-0-88487-660-1 Paperback Author: Jeppesen Publisher: Jeppesen Edition: 2018</p>	
<p>Title: FAR/AIM 2023 * ISBN: 978-1-64425-212-3 Author: Federal Aviation Administration / Aviation Supplies and Academics Publisher: Aviation Supplies and Academics Edition: 2023</p>	
<p>Title: Pilot Handbook of Aeronautical Knowledge * ISBN: 978-1619544734 Author: Federal Aviation Administration / Aviation Supplies and Academics Publisher: Aviation Supplies and Academics Edition 2016</p>	
<p>Title: Airplane Flying Handbook * ISBN: 978-1644250686 Author: Federal Aviation Administration / Aviation Supplies and Academics Publisher: Aviation Supplies and Academics Edition: 2021</p>	
<p>Title: Private Pilot 2022 Test Prep ISBN: 978-1644252475 Author: Federal Aviation Administration / Aviation Supplies and Academics Publisher: Aviation Supplies and Academics Edition: 2023</p>	
<p>Title: Airman Certification Standards: Private Pilot Airplane * ISBN: 978-1619549036 Author: Federal Aviation Administration / Aviation Supplies and Academics Publisher: Aviation Supplies and Academics Edition: 2019</p>	
<p>Title: Chart Supplement: East Central U.S. ISBN: 979-8430888312 Author: Federal Aviation Administration / Department of Transportation Publisher: Independently Published Edition: VALID 29 DEC 2022 to 23 FEB 2023</p>	

<p>Title: Private Pilot Oral Exam Guide ISBN: 978-1644250150 Author: Michael Hayes Publisher: Aviation Supplies and Academics Edition: 2020</p>	
<p>Title: Guided Flight Discovery: Private Pilot Syllabus ISBN: 978-0-88487-654-0 Author: Jeppesen Publisher: Jeppesen Edition: 2016</p>	

*Marked books are available FREE via faa.gov website.

- **Required Materials**

<p>VFR Sectional Chart: Cincinnati Valid 12/29/2022 to 02/23/2023</p>	
<p>Forever Sectional Plotter by Sporty's</p>	
<p>ASA Composite E6B Computer Electronic E6Bs will not be used in class, but are permitted through flight training</p>	
<p>Aviation Headset – Airplane Obtained from https://www.sportys.com/aviation-headsets.html or other online sources. Must have dual plug cord. Prices vary based on brand and model.</p>	
<p>Logbook – Pilot's Flight Log and Record Alternate versions can be obtained online.</p>	

Evaluation of Students

Course Assignments

Date	Subject	Percentage
Week 4	Stage 1 Exam	25%
Week 7	Stage 2 Exam	25%
Week 11	Stage 3 Exam	25%
Ongoing	Homework and Quizzes	25%

Grading System – A grade of C or higher is required for this course to count as a prerequisite for corresponding AVI courses.

Grading Scale

A = 90% - 100% B = 80% - 89% C = 70% - 79% D = 60% - 69% F ≤ 59%

Course Content, Weekly Course Outline and Activities

Week	Topic	Reading and Assignments
Week 1	Aerodynamics and Flight Controls	Jepp Chapter 2A, 3
Week 2	Systems, Certificates and Documentation	Jepp Chapter 2B, 2C FAR/AIM 61.3, 91.205
Week 3	Flight Environment and Airport Operations	Jepp Chapter 4 FAR Part 71, 73 AIM Chapter 2-3, Chapter 3
Week 4	Communications and Exam Review Exam	Jepp Chapter 5 FAR 91.113, 91.123, 91.125 AIM Chapter 4-2
Week 5	Weather and Weather Reporting	Jepp Chapter 6, 7 FAR 91.155 AIM Table 3-1-1
Week 6	Regulations, Privileges and Limitations	Jepp Chapter 1A, 1B FAR 61.113, 61.117
Week 7	Emergency Procedures and Exam Review Exam	FAR 91.13, 91.119 AIM Chapter 6, 7 49 CFR Part 830

Week	Topic	Reading and Assignments
Week 8	Human Factors and Airplane Performance	Jepp Chapter 1C, 8, 10 FAR 91.17, 91.211 AIM Chapter 8
Week 9	Navigation	Jepp Chapter 9
Week 10	Cross Country Flight Planning	Jepp Chapter 11
Week 11	Exam Review Exam	
Week 12 - 15	FAA Written Exams Check Ride Prep	Assigned Cross Country Plans Oral Exam Guide Review Chapters

Disclaimer: Course schedule, topics, evaluation and assignments may be changed at the instructor's discretion.

Course Policies and Resources

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Academic Integrity

<http://www.wright.edu/students/judicial/academic-integrity-student-guide.pdf>

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The OEI exists to provide an inclusive, equitable, working, living, and learning environment for members of the Wright State University community. OEI is responsible for compliance with federal and state law as well as University policy regarding equity and equal employment opportunity in personnel matters and university issues of harassment and discrimination, including relationship violence and sexual misconduct. Specifically, OEI is tasked with investigating and resolving complaints related to violations of the University Non-Discrimination Statement as well as the Gender Based Harassment and Violence Policy. All members

of the WSU community, guests, and visitors are protected by these policies regardless of their sexual orientation, gender identity, or gender expression. For more information, please visit www.wright.edu/oei.

Sex/Gender-Based Harassment

Wright State University is committed to maintaining a safe and healthy educational and work environment in which no member of the university community is, on the basis of actual or perceived sex, gender, gender identity, gender expression and or sexual orientation, excluded from participation in, denied the benefits of, or subjected to discrimination in any university program or activity. Wright State University does not discriminate on the basis of sex or gender in its education programs and activities. Sex/Gender-based harassment and violence, including sexual violence, are forms of sex discrimination in that they deny or limit an individual's ability to participate in or benefit from university programs or activities.

**Private Pilot Flight Lab 1
Wright State University
Department of Kinesiology and Health
AVI 2002**

Instructor Information

Name - Click or tap here to enter text.

Contact Information

EMAIL: Click or tap here to enter text.

OFFICE: Click or tap here to enter text.

OFFICE HOURS: Click or tap here to enter text.

Course Information

Course Meeting Details - To be scheduled with assigned flight instructor. First Flight Aviation, Dayton-Wright Brothers airport.

Schedule Type – Face to Face (F2F), Lab

Additional Course Requirements

- Minimum age 17 years old
- English proficient
- Minimum FAA 3rd Class Medical Certificate
- Corequisite course with AVI 2001 Private Pilot Ground

Course Catalogue Description – Aeronautical knowledge and experience. Develop the flight proficiency necessary to conduct your first solo flight in a single engine land aircraft. Must be a United States citizen. Minimum age of 17 years old. Must have class 1 medical certificate.

Course Description – AVI 2002 Private Pilot Flight Lab 1 will introduce the student to flight training in a single engine land aircraft and develop the skills, decision making, and knowledge necessary to conduct their first solo flight. The course is to be taken alongside AVI 2001 and will maintain a flight hold for the first 2 weeks of the program while students familiarize themselves with basic aerodynamics and flight controls taught in the Ground School. Flights will be scheduled on an individual basis with the student's assigned flight instructor, and will be conducted in multiple, 3-hour blocks each week. Upon completion of the student's first solo, flight training can

continue by registering for AVI 2004 Private Pilot Flight Lab 2 to get an FAA issued Private Pilot Certificate.

Credit Hours – 1 Credit Hour

Repeatable for Credit? No

Prerequisite Course(s) – None

Corequisite Course(s) – AVI 2001 Private Pilot Ground

Enrollment Restriction(s) – International students prohibited at this time.
Department Approval Required

Course Attributes - This course is a competency based educational program.

Course Learning Objectives - Students enrolled in this course will learn to:



- Demonstrate all required maneuvers included in the FAA pre-solo requirements 14 CFR 61.87.
- Use risk management, aeronautical decision making, radio communication and weather forecasting to perform safe, effective local area flights in a single-engine airplane.
- Identify the biological and psychologically based hazards of human factors.
- Perform their first solo flight.

Course Learning Outcomes – As a result of their learning experience, students successfully completing this course can:

- Demonstrate all required maneuvers included in the FAA pre-solo requirements 14 CFR 61.87.
- Use risk management, aeronautical decision making, radio communication and weather forecasting to perform safe, effective local area flights in single-engine airplanes.
- Identify the biological and psychologically based hazards of human factors.
- Perform their first solo flight.

Course Materials – See required books and materials for AVI 2001 Private Pilot Ground School

- **Optional Materials (Not Required)**

<p>iPad / iPhone Must be an iOS compatible device Must be GPS / cellular service capable Cellular provider not required</p>	
<p>ForeFlight Subscription software <ul style="list-style-type: none"> • Recommend Pro, \$240/yr iOS compatible only</p>	

Evaluation of Students

Course Assignments - Completion of Private Pilot flight experience up to and including Initial Solo under FAA part 61 requirements as per the First Flight Aviation Training Course Outline, Lesson 12-B (Initial Solo).

Grading System – Pass / Unsatisfactory

Course Content, Weekly Course Outline and Activities

Week	Topic	Reading and Assignments
Week 1 - 2	Flight Hold	Airplane Flying Handbook Chapter 1, 2, 3
Week 3	Introduction to Flight Basic Maneuvers	AFH Chapter 5, 7, 8
Week 4	Ground Reference Maneuvers Slow Flight Imminent Stalls	AFH Chapter 4, 6
Week 5	Simulated Instrument Flight Emergency Procedures	AFH Chapter 10
Week 6	Tower Operations Preparation for Solo Flight	
Week 7	Solo Flight Stage 1 Check	

- Disclaimer: Flight schedule, topics, evaluation and assignments may be subject to change based on instructor's discretion, weather, and airplane availability.

Course Policies and Resources

Attendance is mandatory per the Federal Aviation Administration and Training Course Outline. If the student cannot attend class (excused or unexcused), it is the student's responsibility to meet with the primary instructor to make up the lesson. If students cannot meet with the primary instructor during office hours or by appointment, an additional flight instructor from First Flight Aviation can be used to cover the missed lesson(s) for a fee of \$45/hr. In the event lessons cannot be completed before the beginning of the next stage, the student will be unable to continue ground and/or flight training until the requirements of the previous stage are met. Failure to complete missed lessons within 1 week after the end of stage will result in a meeting with either the Primary Instructor, Chief Flight Instructor, or Program Director to discuss continuation or the possible removal from the flight program.

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As completion of the program is reliant on factors outside of the students', college's, or flight school's control (weather, aircraft maintenance, etc), it is possible to reach the end of the semester without successful completion of flight training. In this case, you will receive a grade of incomplete (I) until flight training has concluded, whereupon the grade will be changed accordingly.

Program or College Policies and Resources

Students are expected to comply with the ethical standards of both Wright State University and First Flight Aviation. Improper language and behavior in class or at the airport can be grounds for separation from the program. As pilots, we are expected to maintain a level of decorum appropriate to our positions and responsibilities.

Students are required to complete this course in order to enroll in AVI 2004 Private Pilot Flight Lab 2.

University Policies and Resources

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Private Pilot Flight Lab 2
Wright State University
Department of Kinesiology and Health
AVI 2004

Instructor Information

Name - Click or tap here to enter text.

Contact Information

EMAIL: Click or tap here to enter text.

OFFICE: Click or tap here to enter text.

OFFICE HOURS: Click or tap here to enter text.

Course Information

Course Meeting Details - To be scheduled with assigned flight instructor. First Flight Aviation, Dayton-Wright Brothers airport.

Schedule Type – Face to Face (F2F), Lab

Additional Course Requirements

- Minimum age 17 years old
- English proficient
- Minimum FAA 3rd Class Medical Certificate

Course Catalogue Description – Aeronautical knowledge and experience. Complete the flight training and aeronautical experience necessary to take the FAA Practical Exam and obtain a Private Pilot Certificate. Must be a United States citizen. Minimum age of 17 years old. Must have class 1 medical certificate.

Course Description – AVI 2004 Private Pilot Flight Lab 2 will continue flight training from the point of Initial Solo obtained in AVI 2002 and continue to develop the skills, decision making, and knowledge necessary to complete the Federal Aviation Administration Private Pilot Check Ride. Labs will consist of multiple 3-hour blocks each week, covering ground reference maneuvers, cross country flight planning and execution, night operations, emergency procedures and simulated instrument conditions.

Credit Hours – 1 Credit Hours

Repeatable for Credit? No

Prerequisite Course(s) – AVI 2002 Private Pilot Flight Lab 1

Corequisite Course(s) – None

Enrollment Restriction(s) – International students prohibited at this time. Student must have valid medical certificate. Department Approval Required.

Course Attributes - AVI 2004 will be conducted with 'rolling enrollment', allowing for students to enroll upon completion of AVI 2002 regardless of date within the standard college semester.

Course Learning Objectives - Students enrolled in this course will learn to:



- Use risk management, aeronautical decision making, radio communication and weather forecasting to perform safe, effective, solo flights in a single-engine airplane.
- Demonstrate all required maneuvers included in the FAA Private Pilot Check Ride to the level required by the Airman Certification Standards.
- Identify the different methods of navigation, the benefits of each, and use them to properly plan and execute cross-country flights.
- Identify the biological and psychologically based hazards of human factors.

Course Learning Outcomes – As a result of their learning experience, students successfully completing this course can:

- Use risk management, aeronautical decision making, radio communication and weather forecasting to perform safe, effective, solo flights in a single-engine airplane.
- Demonstrate all required maneuvers included in the FAA Private Pilot Check Ride to the level required by the Airman Certification Standards.
- Identify the different methods of navigation, the benefits of each, and use them to properly plan and execute cross-country flights.
- Identify the biological and psychologically based hazards of human factors.
- Demonstrate the acquisition of all required aeronautical knowledge and flight experience required by Federal Aviation Regulation 14 CFR 61.103.

Course Materials – See required books and materials for AVI 2001 Private Pilot Ground School

- **Optional Materials (Not Required)**

<p>iPad / iPhone Must be an iOS compatible device Must be GPS / cellular service capable Cellular provider not required</p>	
<p>ForeFlight Subscription software <ul style="list-style-type: none"> • Recommend Pro, \$240/yr iOS compatible only</p>	

Evaluation of Students

Course Assignments

Completion of Private Pilot flight experience as per First Flight Aviation Training Course Outline, End of Course, and Federal Aviation Regulation 14 CFR 61.103.

Grading System – Pass / Unsatisfactory

Course Content, Weekly Course Outline and Activities

Week	Topic	Reading and Assignments
Week 1	Performance Landings Introduction to VOR and Radio Navigation	
Week 2	Emergency Procedures Solo Local	
Week 3	Night Flight Introduction to Cross Country Flight	
Week 4	Night Cross Country Stage 2 Check	Complete FAA Written Exam
Week 5	Solo Cross Country Ground Reference and Performance Maneuvers	
Week 6	Solo Local Check Ride Prep	Oral Exam Review
Week 7	Check Ride Prep	Oral Exam Review
Week 8	Check Ride Prep Stage 3 Check / End of Course	Oral Exam Review

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**Air Traffic Control Basics
Wright State University
Department of Kinesiology and Health
AVI 2010**

Instructor Information

Name - Click or tap here to enter text.

Contact Information –

EMAIL: Click or tap here to enter text.

PHONE: Click or tap here to enter text.

OFFICE: Click or tap here to enter text.

OFFICE HOURS: Click or tap here to enter text.

Course Information

Course Meeting Details – Thursdays 5 pm – 8 pm

Schedule Type – Lecture and Discussion.

Course Catalog Description – Air Traffic Control Basics course is designed to introduce the student to air traffic control operations. This course provides students with a basic knowledge of the air traffic control system, procedures, publications, mishaps, and weather.

Course Description Air Traffic Control Basics course is designed to introduce the student to air traffic control operations. This course provides an overview of the major governing authorities including the Federal Aviation Administration, and the International Civil Aviation Organization. Topics include air traffic control mission, organization, operations, and regulations used by pilots and air traffic controllers. Air traffic control procedures to include publications, manuals, maps, and charts usage will be explained. Brief history and future of air traffic control are also discussed. This course provides students with a basic knowledge of the air traffic control system.

Credit Hours – 3

Cross Listing – N/A

Repeatable for Credit? No

Prerequisite Course(s) – No

Corequisite Course(s) – No

Enrollment Restriction(s) – International students prohibited at this time

Course Attributes – This course is competency-based

Course Learning Objectives –

1. Students enrolled in this course will learn to identify critical aviation events that have influenced the formation of the National Airspace System (NAS).
2. Students enrolled in this course will learn to describe the duties, responsibilities, certificate and rating requirements associated with air traffic control specializations.
3. Students enrolled in this course will learn to interpret air traffic control phraseology and format used for ATC communications with pilots and inter/intra agencies.
4. Students enrolled in this course will learn to describe how various types of new technologies will affect the future ATC system.
5. Students enrolled in this course will learn to read aviation weather, identify characteristics, and effects of hazardous aviation weather.

Course Learning Outcomes –

1. As a result of their learning experience, students successfully completing this course can identify critical aviation events that have influenced the formation of the National Airspace System (NAS).
2. As a result of their learning experience, students successfully completing this course can describe the duties, responsibilities, certificate and rating requirements associated with air traffic control specializations.
3. As a result of their learning experience, students successfully completing this course can interpret air traffic control phraseology and format used for ATC communications with pilots and inter/intra agencies.
4. As a result of their learning experience, students successfully completing this course can describe how various types of new technologies will affect the future ATC system.
5. As a result of their learning experience, students successfully completing this course can read aviation weather and identify characteristics/effects of hazardous aviation weather.

Course Materials -

Title: Publication Manual of the American Psychological Association - (APA)

ISBN: 978-1433832161 Paperback

ISBN2: 978-1433832185 eBook

Authors: American Psychological Association

Publisher: American Psychological Association

Publication Date: 2019

Edition: 7th

Title: A Career in Air Traffic Control
ISBN: 978-0996245265 (Paperback)
Authors: Michael S. Nolan & Sharon L. LaRue
Publisher: eAcademicBooks LLC
Publication Date: 2018
Edition: 2nd

Evaluation of Students

Assignments

In Weeks 1- 5 and 9 -12, students will conduct research and explore areas in Air Traffic Control. Paper and Diagram assignments will be 1-2 pages in length not including title and reference pages. Students will utilize APA-7 format for written assignments. Papers will automatically be evaluated through Turnitin. METAR Recording assignment will be 1-2 minutes in length utilizing proper weather delivery format and phraseology.

Student Presentations

There are two student presentations in the course due in Week 7 and Week 14. Each presentation will be 5-10 minutes in length delivered utilizing Microsoft PowerPoint. Student presentations are designed to measure understanding of the subject matter presented and advance student public speaking skills.

Midterm and Final Examinations

There are two examinations in this course located in Weeks 8 and 15. Each examination is designed to measure understanding of the material presented to that point. Professor led examination preparation will be conducted the week prior to the examination. Examinations are without the aid of reference.

Grading System – Students will be evaluated 0-100% for each graded task with average weighted values as follows: Assignments = 50%, Student Presentations = 30%, Exams = 20%

Grading Scale - A = 90% - 100% B = 80% - 89% C = 70% - 79% D = 60% - 69% F = 59% or below

Course Content, Weekly Course Outline and Activities

Course Schedule

Week 1: Air Traffic Control Introduction

- 1.1 Introductions and Course Expectations
- 1.2 Lecture: Air Traffic Control Introduction
- 1.3 Reading: Air Traffic Control History

1.4 Assignment: Air Traffic Controller Strike of 1981 and its effect on the NAS Paper

Week 2: Air Traffic Control History

2.1 Lecture: Air Traffic Control History and Events

2.2 Reading: Air Traffic Control Organization

2.3 Assignment: Air Traffic Organization Diagram

Week 3: Air Traffic Control Organization

3.1 Lecture: Air Traffic Control Organization

3.2 Reading: Air Traffic Control System Structure

3.3 Assignment: Airspace and Special Use Airspace Classification Diagram

Week 4: Air Traffic Control System Structure

4.1 Lecture: Air Traffic Control System Structure

4.2 Reading: Air Traffic Control Qualifications

4.3 Assignment: How to Become an Air Traffic Controller Paper

Week 5: Air Traffic Control Qualifications

5.1 Lecture: Air Traffic Control Qualifications

5.2 Reading: Air Traffic Control Procedures

5.3 Assignment: Air Traffic Control Facility Position Diagram

Week 6: Air Traffic Control Procedures

6.1 Lecture: Air Traffic Control Procedures

6.2 Student Presentation: Air Traffic Control Facility PowerPoint Presentation

Week 7: Student Presentations and Mid-Term Preparation

7.1 Student Presentations

7.2 Mid-Term Preparation

Week 8: Midterm Exam

8.1 Midterm Exam

8.2 Reading: Air Traffic Control Communication Procedures and Phraseology

Week 9: Air Traffic Control Communication Procedures and Phraseology

9.1 Lecture: Air Traffic Control Communication Procedures and Phraseology

9.2 Reading: Aviation Navigation Systems

9.3 Assignment: Communication or Navigation Related Accident or Incident Paper

Week 10: Aviation Navigation Systems

10.1 Lecture: Aviation Navigation Systems

10.2 Reading: Aircraft Separation

10.3 Assignment: Aircraft Separation Minima Diagram

Week 11: Aircraft Separation

11.1 Lecture: Aircraft Separation

11.2 Reading: Weather

11.3 Assignment: METAR Recording

Week 12: Weather

12.1 Lecture: Weather

12.2 Reading: Emergencies

12.3 Assignment: Air Traffic Control Emergency Response Paper

Week 13: Emergencies

13.1 Lecture: Emergencies

13.2 Reading: NextGen

13.3 Student Presentation: Aviation Mishap PowerPoint Presentation

Week 14: Student Presentations and Final Preparation

14.1 Student Presentations

14.2 Final Preparation

Week 15: Final Exam and Closing Discussion

15.1 Final Exam

15.2 Closing Discussion

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**Instrument Rating Ground School
Wright State University
Aviation Technology
AVI 2101**

Instructor Information

Name:

Contact Information

EMAIL:

PHONE:

OFFICE:

OFFICE HOURS:

Course Information

Course Meeting Details – First Flight Aviation Classroom, Dayton-Wright Brothers airport,

Schedule Type – Face to Face (F2F), Lecture, Discussion

Additional Course Requirements

- English proficient
- Minimum FAA 3rd Class Medical Certificate
- Corequisite course with AVI 2102 Instrument Rating Flight Lab

Course Catalog Description

Provides a framework of the knowledge, skill, and experience necessary to successfully complete the Federal Aviation Administration's Instrument Rating Airplane knowledge test as well as adequately prepare the student for the flight portions of the instrument flight lab. Must be a United States citizen.

Course Description

This course provides a framework of the knowledge, skill, and experience necessary to successfully complete the Federal Aviation Administration's Instrument Rating Airplane knowledge test as well as adequately prepare the student for the flight portions of the instrument flight lab.

Credit Hours - 3

Repeatable for Credit? No

Prerequisite Course(s) – AVI 2001 with a grade of C or better; AVI 2004.

Corequisite Course – AVI 2102 Instrument Rating Flight Lab

Enrollment Restriction – No international students accepted at this time. Enrolled in the Aviation Science and Technology program.

Course Learning Objectives – Students enrolled in this course will learn to:

- Identify the rules and regulations that govern flight into instrument meteorological conditions.
- Explain the weather, instruments, biological, and psychological factors that affect a pilot during instrument flight.
- Demonstrate the ability to read and interpret instrument approach plates, including the type of equipment needed, the minimums at which the approach ends, and the missed approach procedure.
- Demonstrate the knowledge necessary to pass the Federal Aviation Administration's Instrument Rating Airplane written knowledge exam.

Course Learning Outcomes – As a result of their learning experience, students successfully completing this course can:

- Identify the rules and regulations that govern flight into instrument meteorological conditions.
- Explain the weather, instruments, biological, and psychological factors that affect a pilot during instrument flight.
- Demonstrate the ability to read and interpret instrument approach plates, including the type of equipment needed, the minimums at which the approach ends, and the missed approach procedure.
- Demonstrate the knowledge necessary to pass the Federal Aviation Administration's IRA written knowledge exam.

Course Materials

- **Required Materials**

<p>Title: Guided Flight Discovery: Instrument / Commercial ISBN: 978-0884872788 Author: Jeppesen Publisher: Jeppesen Edition: 2021</p>	
<p>Title: FAR/AIM 2023 * ISBN: 978-1-64425-212-3 Author: Federal Aviation Administration / Aviation Supplies and Academics Publisher: Aviation Supplies and Academics Edition: 2023</p>	
<p>Title: Instrument Rating 2023 Test Prep ISBN: 978-1644252451 Author: Federal Aviation Administration / Aviation Supplies and Academics Publisher: Aviation Supplies and Academics Edition: 2023</p>	
<p>iPad / iPhone Must be an iOS compatible device Must be GPS / cellular service capable Cellular provider not required</p>	
<p>ForeFlight Subscription software <ul style="list-style-type: none"> • Recommend Pro, \$240/yr iOS compatible only</p>	

Note: E-Books are acceptable in place of hard copies

Books marked * are available FREE via faa.gov website.

Evaluation of Students

Course Assignments

Week		
Week 5	Stage I Exam	20%
Week 10	Stage II Exam	20%
Week 13	Stage III Exam	20%
Week 15	End of Course Exam	40%

Grading System - Grades will be given out following the traditional A, B, C, D, F scale. A grade of C or better is required to take AVI 2201 Commercial Ground 1.

Grading Scale

A = 90% - 100% B = 80% - 89% C = 70% - 79% D = 60% - 69% F ≤ 59%

Course Content, Weekly Course Outline and Activities

Week	Topic	Homework
Week 1	Lesson 1: Introduction to Instrument, Requirements, Human Factors Lesson 2: Flight Instrument Systems	Lesson 1: Jeppesen Chapter 2A Lesson 2: Jeppesen Chapter 2B
Week 2	Lesson 3: Attitude Instrument Flying Lesson 4: Instrument Navigation	Lesson 3: Jeppesen Chapter 2C Lesson 4: FARs 1, 61, 91 and NTSB 830
Week 3	Lesson 5: Instrument Federal Aviation Regulations Lesson 6: Airports, Airspace, and Flight Information	Lesson 5: Jeppesen Chapter 3A Lesson 6: Jeppesen Chapter 3B
Week 4	Lesson 7: Air traffic Control System Lesson 8: Air Traffic Control Clearances	Lesson 7: Jeppesen Chapter 3C Lesson 8: Lessons 1-8 Review
Week 5	Lesson 9: STAGE I EXAM Lesson 10: Departure Charts and Procedures	Lesson 9: Jeppesen Chapter 4 Lesson 10: Jeppesen Chapter 5A-B
Week 6	Lesson 11: Enroute and Area Charts, Enroute Procedures Lesson 12: Holding Procedures	Lesson 11: Jeppesen Chapter 5C Lesson 12: Jeppesen Chapter 6
Week 7	Lesson 13: Arrival Charts and Procedures Lesson 14: Approach Charts	Lesson 13: Jeppesen Chapter 7A Lesson 14: Jeppesen Chapter 7B
Week 8	Lesson 15: Approach Procedures Lesson 16: VOR and NDB Approaches	Lesson 15: Jeppesen Chapter 8A Lesson 16: Jeppesen Chapter 8B

Week 9	Lesson 17: ILS Approaches Lesson 18: RNAV Approaches	Lesson 17: Jeppesen Chapter 8C Lesson 18: Lessons 10-18 Review
Week 10	Lesson 19: STAGE II EXAM Lesson 20: Weather Factors and Hazards	Lesson 19: Jeppesen Chapter 9A-B Lesson 20: Jeppesen Chapter 9C
Week 11	Lesson 21: Printed Weather Reports and Forecasts Lesson 22: Graphic Weather Products	Lesson 21: Jeppesen Chapter 9D Lesson 22: Jeppesen Chapter 9E
Week 12	Lesson 23: Sources of Weather Information Lesson 24: Instrument Emergency Procedures	Lesson 23: Jeppesen Chapter 10A Lesson 24: Jeppesen Chapter 10B-C
Week 13	Lesson 25: Single Pilot Resource Management, IFR Flight Planning Lesson 26: STAGE III EXAM	Lesson 25: Lessons 20-25 Review Lesson 26: Lessons 1-26 Review
Week 14	Lesson 27: Exam Review Lesson 28: Exam Review	
Week 15	END OF COURSE EXAM	N/A

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The OEI exists to provide an inclusive, equitable, working, living, and learning environment for members of the Wright State University community. OEI is responsible for compliance with federal and state law as well as University policy regarding equity and equal employment opportunity in personnel matters and university issues of harassment and discrimination, including relationship violence and sexual misconduct. Specifically, OEI is tasked with investigating and resolving

complaints related to violations of the University Non-Discrimination Statement as well as the Gender Based Harassment and Violence Policy. All members of the WSU community, guests, and visitors are protected by these policies regardless of their sexual orientation, gender identity, or gender expression. For more information, please visit www.wright.edu/oei.

Sex/Gender-Based Harassment

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**Instrument Rating Flight Lab
Wright State University
Aviation Technology
AVI 2102**

Instructor Information

Name

Contact Information

EMAIL:

PHONE:

OFFICE:

OFFICE HOURS:

Course Information

Course Meeting Details - To be scheduled with assigned flight instructor. First Flight Aviation, Dayton-Wright Brothers airport.

Schedule Type – Face to Face (F2F), Lab

Additional Course Requirements

- Minimum age 17 years old
- English proficient
- Minimum FAA 3rd Class Medical Certificate
- Corequisite course with AVI 2101 Instrument Rating Ground
- Enrollment in the Aviation Science and Technology Program

Course Catalog Description

Provides a framework of the knowledge, skill, and experience necessary to successfully pass the Instrument Rating Airplane practical test as well as operate safely and professionally under instrument flight rules in the national airspace system. Must be a United States citizen.

Course Description

This course provides a framework of the knowledge, skill, and experience necessary to successfully pass the Instrument Rating Airplane practical test as well as operate safely and professionally under instrument flight rules in the national airspace system.

Credit Hours- 1

Repeatable for Credit?

No

Prerequisite Course

AVI 2001 with a grade of C or better, AVI 2004

Corequisite Courses

AVI 2101 Instrument Rating Ground

Enrollment Restriction

Department approval required, No international students accepted at this time. Enrollment in the Aviation Science and Technology Program required.

Course Learning Objectives - Students enrolled in this course will learn to:

- Demonstrate all requirements included in the FAA instrument rating 14 CFR 61.65.
- Use risk management, aeronautical decision making, radio communication and weather forecasting to perform safe, effective flights in instrument meteorological conditions where outside references are limited or nonexistent.
- Identify the biological and psychologically based hazards of human factors with respect to low visibility and instrument conditions.
- Interpret and execute instrument approach plates.

Course Learning Outcomes – As a result of their learning experience, students successfully completing this course can:

- Demonstrate all requirements included in the FAA instrument rating 14 CFR 61.65.
- Use risk management, aeronautical decision making, radio communication and weather forecasting to perform safe, effective flights in instrument meteorological conditions where outside references are limited or nonexistent.
- Identify the biological and psychologically based hazards of human factors with respect to low visibility and instrument conditions.
- Interpret and execute instrument approach plates.

Course Materials

- **Required Materials**

<p>Title: Guided Flight Discovery: Instrument / Commercial ISBN: 978-0884872788 Author: Jeppesen Publisher: Jeppesen Edition: 2021</p>	
<p>Title: FAR/AIM 2023 * ISBN: 978-1-64425-212-3 Author: Federal Aviation Administration / Aviation Supplies and Academics Publisher: Aviation Supplies and Academics Edition: 2023</p>	
<p>Title: Instrument Rating 2023 Test Prep ISBN: 978-1644252451 Author: Federal Aviation Administration / Aviation Supplies and Academics Publisher: Aviation Supplies and Academics Edition: 2023</p>	
<p>iPad / iPhone Must be an iOS compatible device Must be GPS / cellular service capable Cellular provider not required</p>	
<p>ForeFlight Subscription software <ul style="list-style-type: none"> • Recommend Pro, \$240/yr iOS compatible only</p>	

Note: E-Books are acceptable in place of hard copies

Books marked * are available FREE via faa.gov website.

Evaluation of Students

Course Assignments

Successfully passing this class is solely dependent upon successfully completing all lessons of the curriculum and passing the end of course practical exam in accordance with the approved FAA Training Course Outline.

Grading System

Grades will follow the pass/fail method.

Course Content, Weekly Course Outline and Activities

Week	Topic	Homework
Week 1	Lesson 1: Basic instrument maneuvers Lesson 2: Instrument performance maneuvers, unusual attitudes	N/A Ground lesson 4
Week 2	Lesson 3: Attitude instrument flying Lesson 4: Attitude instrument flying + equipment failures	N/A Ground lessons 5-6
Week 3	Lesson 5: Attitude instrument flying (full/partial panel) Lesson 6: Attitude instrument flying (full/partial panel)	N/A Ground lesson 7
Week 4	Lesson 7: Attitude instrument flying (full/partial panel) Lesson 8: VOR navigation	Ground lesson 8 Ground lesson 9
Week 5	Lesson 9: NDB navigation Lesson 10: GPS navigation	N/A N/A
Week 6	Lesson 11: GPS Navigation Lesson 12: Localizer navigation	N/A Prep for stage I check
Week 7	Lesson 13: Stage I Check Lesson 14: Navaid based holding patterns	Ground lessons 10-12 N/A
Week 8	Lesson 15: Navaid based holding patterns Lesson 16: Navaid based holding patterns at DME intersections	N/A Ground lessons 13-16
Week 9	Lesson 17: VOR approaches Lesson 18: RNAV + NDB Approaches	Ground lessons 17-18
Week 10	Lesson 19: RNAV + NDB approaches Lesson 20: ILS approaches	N/A N/A
Week 11	Lesson 21: Partial panel approaches Lesson 22: Stage II check preparation	Prep for stage II check Prep for stage II check/written complete
Week 12	Lesson 23: Stage II Check Lesson 24: IFR cross country	Ground lessons 20-21 Ground lesson 22
Week 13	Lesson 25: IFR cross country	Ground lessons 23-25

	Lesson 26: IFR cross country	Instrument rating practical test briefing
Week 14	Lesson 27: IFR cross country Lesson 28: <u>Stage III Check</u>	Stage III Exam End of course exam
Week 15	Lesson 29: <u>End of course</u>	Study for checkride

Disclaimer: Course schedule, topics, evaluation and assignments may be changed at the instructor's discretion.

Course Policies and Resources

Attendance is mandatory per the Federal Aviation Administration and Training Course Outline. If the student cannot attend class (excused or unexcused), it is the student's responsibility to meet with the primary instructor to make up the lesson. If students cannot meet with the primary instructor during office hours or by appointment, an additional flight instructor from First Flight Aviation can be used to cover the missed lesson(s) for a fee of \$45/hr. In the event lessons cannot be completed before the beginning of the next stage, the student will be unable to continue ground and/or flight training until the requirements of the previous stage are met. Failure to complete missed lessons within 1 week after the end of stage will result in a meeting with either the Primary Instructor, Chief Flight Instructor, or Program Director to discuss continuation or the possible removal from the flight program.

In order to complete various stages of flight and ground training, a written endorsement must be provided by a Certified Flight Instructor. The nature of that endorsement requires that the instructor is confident the student can pass that stage of training (FAA Written, Solo Flight, Check Ride, etc). **The Flight Instructor reserves the right to withhold their endorsement for any reason.**

As completion of the program is reliant on factors outside of the students', college's, or flight school's control (weather, aircraft maintenance, etc), it is possible to reach the end of the semester without successful completion of flight training. In this case, you will receive a grade of incomplete (I) until flight training has concluded, whereupon the grade will be changed accordingly.

Program or College Policies and Resources

Students are expected to comply with the ethical standards of both Wright State University and First Flight Aviation. Improper language and behavior in class or at the airport can be grounds for separation from the program. As pilots, we are expected to maintain a level of decorum appropriate to our positions and responsibilities.

Students are required to complete this course in order to enroll in AVI 2201 and AVI 2202.

University Policies and Resources

Disability Services <http://www.wright.edu/disability-services>.

Students registered with the Office of Disability Services who require special accommodations for lecture, lab, testing, or to complete the requirements of this class, should contact the instructor as soon as possible so arrangements can be made. Additional help and information is available at Office of Disabilities Services (Dayton Campus) or Academic Instructional Services (Lake Campus)

Academic Integrity <http://www.wright.edu/students/judicial/academic-integrity-student-guide.pdf>

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Diversity Statement

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**Aircraft Systems and Powerplants
Wright State University
Department of Kinesiology and Health
AVI 2250**

Instructor Information

Name -

Contact Information

EMAIL:

OFFICE:

OFFICE HOURS:

Course Information

Course Meeting Details – First Flight Aviation Classroom, Dayton-Wright Brothers airport, Tuesday / Thursday 17:00 – 18:30

Schedule Type – Face to Face (F2F), Lecture, Lab

Course Catalog Description – In-depth study of simple and complex aircraft powerplants, fuel, electrical, hydraulic, and environmental systems.

Course Description-

STAGE I Overview of basic systems common to transport category aircraft and how they are related to the Federal Aviation Regulations. Powerplant, reciprocating and Turbine, theory of operation.

STAGE II Study of, electrical, hydraulics, pneumatics, fuel, flight controls, landing gear, aircraft pressurization and air conditioning systems.

STAGE III Understanding of aircraft structures, emergency equipment and what maintenance a pilot can legally do to the aircraft.

Credit Hours – 3.0

Repeatable for Credit? No

Prerequisite Course(s) - None

Corequisite Course(s) - None

Enrollment Restriction(s) - None

Course Attributes – This course is a competency-based education course

Course Learning Objectives – Students enrolled in this course will learn to:

- Describe the basic systems common to transport category aircraft and how they are related to the Federal Aviation Regulations.
- Explain each aircraft system and how it interacts with other systems to include limitations and abnormalities.
- Identify a selected aircraft system, its limitations and normal operation parameters.

Course Learning Outcomes – As a result of their learning experience, students successfully completing this course can:

- Describe the basic systems common to transport category aircraft and how they are related to the Federal Aviation Regulations.
- Explain each aircraft system and how it interacts with other systems to include limitations and abnormalities.
- Identify a selected aircraft system, its limitations and normal operation parameters.

Course Materials

Title: **FAR/AIM 2023 ***
ISBN: 978-1-64425-212-3
Author: Federal Aviation Administration / Aviation Supplies and Academics
Publisher: Aviation Supplies and Academics
Edition: 2023



“*” Marked books are available FREE via faa.gov website.

Evaluation of Students

Course Assignments

Date	Subject	Percentage
Week 5	Stage 1 Exam	20%
Week 11	Stage 2 Exam	20%
Week 15	Stage 3 Final Exam	20%
Weeks 3, 10, 14	Project Presentations	20%
Ongoing	Class Participation	20%

Grading System - Standard traditional letter grades (A,B,C,D,F).

Grading Scale

A = 90% - 100% B = 80% - 89% C = 70% - 79% D = 60% - 69% F ≤ 59%

Course Content, Weekly Course Outline and Activities

Week	Topic	Reading and Assignments
Week 1 Stage 1	Introduction to basic aircraft systems	
Week 2	Power Plant Reciprocating Engines Induction: Fuel / Ignition / oil / cooling / Exhaust / Starting / Combustion (Lab examples at aircraft)	
Week 3	Propellers Fixed/Constant speed Class Project-Presentations	
Week 4	Powerplant Turbine Types/Instrumentation/Engine operation considerations/FOD Lab-at aircraft	
Week 5	Stage I Review/Questions, Answers, Class Discussion Stage I Exam	
Week 6 Stage 2	Aircraft systems in depth Fuel systems/Refueling Procedures Lab-at aircraft	
Week 7	Aircraft systems in depth Heating systems/Electrical systems/Hydraulic systems Lab-at aircraft	
Week 8	Aircraft systems in depth Landing gear/Brakes Lab-at aircraft	
Week 9	Aircraft systems in depth Pressurized aircraft/Oxygen systems/Anti-Ice and Deice systems	

Week	Topic	Reading and Assignments
	Lab-at aircraft	
Week 10	Class Project-Presentations	
Week 11	Stage II Review/Questions, Answers, Class Discussion Stage II Exam	
Week 12	Aircraft Structures-Guest Speaker	
Stage 3		
Week 13	Emergency Equipment	
Week 14	Class Project - Presentations Stage III Course Review/Questions, Answers, Class Discussion	
Week 15	Stage 3 FINAL Exam	

Disclaimer: Course schedule, topics, evaluation and assignments may be changed at the Instructor's discretion.

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Wright State University GEO 4000

Introduction to Meteorology 3 credit hours

Course Description: Clouds, humidity, precipitation, winds, fronts, forecasting, and climate examination. Emphasis on complex processes creating severe weather and climate change.

Overall Class Goal: To learn weather facts and develop an understanding of basic meteorology during this general survey course. You will be asked to analyze facts, apply weather concepts, and draw conclusions.

Text: Ahrens, C. Donald, Meteorology Today (An Introduction to Weather, Climate, and the Environment), 12th Edition; the Workbook & Study Guide is not required, but some find it helpful. Reading assignments and tests are all based on material in the text. It is imperative that each student purchases his/her own copy of the text or rent one from an online provider. The text contains the material for the course, you will not likely succeed without it.

Instructors:

All correspondence should be conducted through Pilot for this course whenever possible. Email with individual questions and concerns are welcome to provide privacy to the students. Correct spelling and punctuation are expected at all times in communication – you are college students and are expected to write as such.

Class Meeting Time: N/A. This course is an asynchronous, online offering. This means that you can work on the material at a time of your convenience with course deadlines kept in mind. However, we recommend you spend at four to six hours reading and doing assignments each week. You are expected to meet all deadlines.

Office Hours: None. Any questions or concerns may be emailed to the instructor(s).

Learning Objectives: Students enrolled in this course will learn:

- The difference between weather and climate data and how to use them appropriately
- The impact of both weather and climate on our environment and lives
- How to recognize the conditions necessary for severe weather and what to do when it occurs
- Reliable sources for weather and climate information

Learning Outcomes: As a result of their learning experience, students successfully completing this course know:

- The difference between weather and climate data and how to use them appropriately
- The impact of both weather and climate on our environment and lives
- How to recognize the conditions necessary for severe weather and what to do when it occurs
- Reliable sources for weather and climate information

Evaluation for GEO 4000:

1. Discussion Forums 7 24 %
2. Quizzes (1 per chapter) 16 20 %
3. Weather Related Exercises / Readings 3 12 %
4. Midterm Exams* 2 (12 % each) 24 %
5. Final Exam* 1 20 %

Total class points possible (>90 % is a guaranteed A; do not expect a curve):
100 %

* Unexcused absences from exams will incur an automatic 40% reduction in grade. Exams are available over a 7-day period. Don't miss an exam!!! Late exercises and discussion forums receive zeroes.

GEO 4000 Class Schedule	Chapters (12 th Edition)	ASSIGNMENTS SCHEDULE
DATE		
13 Jan	1-3	Discussion Forums "Who am I" and 1 (Chap 1-3) open
19 Jan		Discussion Forum "Who am I" initial posting due by midnight
26 Jan		Discussion Forum "Who am I" closes at midnight
26 Jan	1-3	Discussion Forum 1 (Chap 1-3) initial posting due by midnight
2 Feb		Discussion Forum 1 (Chap 1-3) closes at midnight
3 Feb	4-6	Discussion Forum 2 (Chap 4-6) opens
9 Feb		Discussion Forum 2 (Chap 4-6) initial post due by midnight
15 Feb		Climate Exercise due by midnight
23 Feb	1-6	Midterm Exam 1 (due 6 PM 23 Feb) (Available 15 Feb)
23 Feb		Discussion Forum 2 (Chap 4-6) closes at midnight
24 Feb	7, 8, 10	Discussion Forum 3 (Chap 7-8, 10) opens
2 – 8 Mar		Spring break
8 Mar	7,8,10	Discussion Forum 3 (Chap 7-8, 10) initial posting due by midnight
14 Mar		Article Review Exercise due by midnight
15 Mar		Discussion Forum 3 (Chap 7-8, 10) closes at midnight
16 Mar	11-13	Discussion Forum 4 (Chap 11-13) opens
22 Mar		Discussion Forum 4 (Chap 11-13) initial posting due by midnight
29 Mar	7-8,10-13	Midterm Exam 2 (due 6 PM 29 Mar) (Available 21 Mar)
29 Mar		Discussion Forum 4 (Chap 11-13) closes at midnight
30 Apr	14-15	Discussion Forum 5 (Chap 14-15) opens
5 Apr	14-15	Discussion Forum 5 (Chap 14-15) initial posting due by midnight
12 Apr		Discussion Forum 5 (Chap 14-15) closes at midnight
13 Apr	17-18	Discussion Forum 6 (Chap 17-18) opens

18 Apr
19 Apr

17-18

Weather Map Exercise due midnight
Discussion Forum 6 (Chap 17-18) initial posting due by
midnight

26 Apr
1 May

Comprehensive

Discussion Forum 6 (Chap 17-18) closes at midnight
Final Exam (due 6 PM 1 May) (Available 25 Apr)

Wright State University

English 1100

Credit Hours: 3

Course Description: Introduces students to principles of effective multi-literacy practices required of college-level thinkers, writers, readers, and communicators. Students are introduced to writing for different contexts with an emphasis on the differences between informal writing and formal, revised, research-based academic writing. Students are taught how to apply the writing process to plan a longer writing project, conduct college-level research, organize drafts, incorporate sources into their writing, give feedback to peer writers, receive feedback from peer writers, and refine their writing style for different audiences and purposes.

Students may use any of the following courses to satisfy the requirements of the Core, but only one may count: ENG 1100 or ENG 1140.

Course Learning Objectives – Students enrolled in this course will learn:

- Facility with multi-literacies (i.e., critical reading, information literacy, visual and/or digital literacy, use of Standard American English in written and verbal language, recognition of and respect for other cultural language styles and forms)
- Beginning college-level rhetorical knowledge of audience, purpose, context, genre conventions
- Beginning college-level research, summary, and analysis, using one or more scholarly source(s) cited in MLA or APA style
- Engagement with multiple composing processes including planning, drafting, engaging with feedback, revising, and polishing
- Critical reflection on their writing in a variety of rhetorical situations and contexts

Course Learning Outcomes – As a result of their learning experience, students successfully completing this course have learned:

- Facility with multi-literacies (i.e., critical reading, information literacy, visual and/or digital literacy, use of Standard American English in written and verbal language, recognition of and respect for other cultural language styles and forms)
- Beginning college-level rhetorical knowledge of audience, purpose, context, genre conventions
- Beginning college-level research, summary, and analysis, using one or more scholarly source(s) cited in MLA or APA style
- Engagement with multiple composing processes including planning, drafting, engaging with feedback, revising, and polishing
- Critical reflection on their writing in a variety of rhetorical situations and contexts

This class is ONLY for native English speakers. If English isn't your first language, you should speak with Cynthia to see if you should take a different section of this course.

Required Materials

No textbooks are needed for this class. You'll access all course materials through our Pilot class site.

Grade Breakdown

25%: Summary (draft, conference, final)

70%: I-search paper (draft, final, conference, presentation)

5%: In-class activities and homework

90-100 = A

80-89 = B

70-79 = C

60-69 = D

Below 60 = F

You must earn a grade of C or higher to pass this class.

Class Policies

Attendance

Come to class! You must arrive on time and leave when class is dismissed to be counted present for the day.

Missing classes may result in you falling behind. If you miss six or more classes, you will fail the class. Activities that are completed during class cannot be made up.

Also, this is a face-to-face course. Online sections of ENG 1100 are offered every term, and as such **there is no online attendance option for this class**. If you won't be able to attend class regularly in person, you should take an online-only or hybrid section of ENG 1100. If you become ill during the term, STAY HOME, check Pilot to see what happened in class the day(s) you missed, and contact Cynthia.

Up to 20% of this class may be conducted online or virtually, at the discretion of the instructor. You'll be notified by email and on Pilot if we will hold class online. If we meet virtually for class or conferences, we will use WebEx in Pilot.

Late work

Major assignments (I-search paper and summary paper) can be turned in up to two days late; they'll lose one letter grade for each day they're late. Major assignments turned in more than two days after the due date won't be accepted and will earn a grade of zero. If you're hospitalized or have another serious health issue, reach out to arrange a meeting with Cynthia to discuss whether it will be feasible for you to remain enrolled.

These activities and assignments will not be accepted late:

- Discussion posts, in-class activities, and homework won't be accepted after the due date or class in which the activity was completed.
- Missed conferences that aren't rescheduled won't earn points.
- The I-search presentation can't be made up.

How to Succeed in English 1100

- Arrive to class on-time and be prepared to work during that time.
- When you arrive for class, log on to our Pilot course, which is where all the materials for class are available.
- Focus on the course work during class time. (Yes, whatever is happening on your phone is more thrilling; however, it's unlikely to help you succeed in this class!)
- Take notes during class.
- If you have an accommodation from the Office of Disability Services, use it.
- Ask questions when you need clarification or assistance. You're welcome to ask a classmate. Cynthia (via email) is also a good source of information.
- Get help early and often! Again, arrange a meeting with Cynthia. See a writing coach in the writing center; more info available at <https://www.wright.edu/student-success/academic-support/university-writing-center>
- Look on Pilot. Check out links and other resources—they're there to help you

Tentative Schedule

This scheduled tentatively lays out the timing of the course and deadlines for major assignments. The most up-to-date information will be on Pilot's news, where detailed lesson plans are located.

Week 1 (August 22, 24, 26)

- Intros and learning about the class
- Using Pilot

Week 2 (29, 31, Sept. 2)

- Writing contexts & academic reading
- Practice reading academic articles

Week 3 (Sept. 7, 9; No class Monday, Sept. 5)

- Intro to summary
- Drafting summary

Week 4 (Sept. 12, 14, 16)

- Drafting summary
- Peer review on summary

Week 5 (Sept. 19, 21, 23)

- No class meetings: Conferences on summary

Week 6 (Sept. 26, 28, 30)

- Intro to I-search
- Brainstorming for topics & prewriting
- Summary due Friday, Sept. 30

Week 7 (Oct. 3, 5, 7)

- Intro to library research
- Evaluating sources

Week 8 (Oct. 10, 12, 14)

- Interviewing
- Research

Week 9 (Oct. 17, 19, 21)

- Drafting I-search

Week 10 (Oct. 24, 26, 28)

- No class meetings: Conferences on I-search drafts

Week 11 (Oct. 31, Nov. 2, 4)

- Revising I-search
- Peer review on I-search

Week 12 (Nov. 7, 9; no class on Nov. 11 for Veterans' Day holiday)

- Intro to I-search presentations & presentation prep

Week 13 (Nov. 14, 16, 18)

- I-search presentations

Week 14 (Nov. 21; no classes Wed., Nov. 23 or Fri., Nov. 25 for Thanksgiving holiday)

- Optional conferences on I-search

Week 15 (Nov. 28, 30, Dec. 2)

- Editing I-search
- Final I-search essay due Friday, December 2

**Commercial Pilot Ground 1
Wright State University
Department of Kinesiology and Health
AVI 2201**

Instructor Information

Name -

Contact Information

EMAIL:

OFFICE:

OFFICE HOURS:

Course Information

Course Meeting Details – First Flight Aviation, Dayton-Wright Brothers airport.

Schedule Type – Face to Face (F2F), Lecture, Discussion

Additional Course Requirements

- Minimum age 18 years old
- English proficient
- Minimum FAA 3rd Class Medical Certificate
- Corequisite course with AVI 2202 Commercial Pilot Flight 1

Course Catalog Description – In-depth knowledge of commercial aviation cross country procedures, regulations, and flight planning. Must be a United States citizen.

Course Description – AVI 2201 Commercial Pilot Ground 1 is the first in a series of two courses designed to provide the knowledge necessary to pass the FAA Commercial Pilot Written Exam and will adequately prepare the student for AVI 2202 Commercial Pilot Flight Lab 1. Lectures will cover cross-country flight planning, refueling procedures, night operations, human factors, crew resource management, aircraft systems, aviation meteorology, and aviation safety.

Credit Hours – 2

Repeatable for Credit? No

Prerequisite Course(s) – AVI 2101 Instrument Pilot Ground grade of C or better, AVI 2102 Instrument Pilot Flight Lab

Corequisite Course – AVI 2202 Commercial Pilot Flight Lab 1

Enrollment Restriction(s) – No international students accepted at this time. Enrolled in the Aviation Science and Technology program.

Course Attributes - This course is a competency based educational program.




Course Learning Objectives – Students enrolled in this course will learn to:

- Build in-depth cross-country flight plans with a focus on commercial operations.
- Apply Crew Resource Management in cross country flight planning.
- Present the regulatory limitations of more complex airspaces as they relate to commercial operations and flight planning.

Course Learning Outcomes – As a result of their learning experience, students successfully completing this course can:

- Build in-depth cross-country flight plans with a focus on commercial operations.
- Demonstrate a cross-country flight, including fuel limitations, weather forecasting, airport operations and regulatory considerations.
- Present the regulatory limitations of more complex airspaces as they relate to commercial operations and flight planning.

Required Course Materials

<p>iPad / iPhone</p> <p>Must be an iOS compatible device</p> <p>Must be GPS / cellular service capable</p> <p>Cellular provider not required</p>	
<p>ForeFlight</p> <p>Subscription software</p> <ul style="list-style-type: none"> • Recommend Pro, \$240/yr <p>iOS compatible only</p>	
<p>Title: FAR/AIM 2023 *</p> <p>ISBN: 978-1-64425-212-3</p> <p>Author: Federal Aviation Administration / Aviation Supplies and Academics</p> <p>Publisher: Aviation Supplies and Academics</p> <p>Edition: 2023</p>	

*Marked books are available FREE via faa.gov website

Evaluation of Students

Course Assignments

Date	Subject	Percentage
Week 8	Stage 1 Exam	30%
Week 15	Final Exam	30%
Ongoing	Class Participation and Flight Plans	40%

Grading System – A grade of C or higher is required for this course to count as a prerequisite for corresponding AVI courses.

Grading Scale

A = 90% - 100% B = 80% - 89% C = 70% - 79% D = 60% - 69% F ≤ 59%

Course Content, Weekly Course Outline and Activities

Week	Topic	Reading and Assignments
Week 1	Airspace/VFR Chart Review	Plan a short, 100nm Cross Country flight through at least three different types of airspace.
Week 2	Meteorology Basics	Review of basic meteorology charts and how to read them
Week 3	Cross-Country Meteorology	Special emphasis on weather prediction for route of flight
Week 4	Single-Pilot Resource Management	Plan a Solo Cross Country flight with a minimum distance of 250NM
Week 5	Commercial Pilot CRM	Plan a Cross country flight with a crew for a minimum of 400NM and explain the duties of each crew member during each stage of flight.
Week 6	Predicting Performance During Long Cross Country Flight	Calculate Fuel burn and updated weight and balance on an aircraft upon arrival after a 350NM Cross Country Flight
Week 7	Environmental and Ice Control Systems	Determine if your aircraft is certified for Flight Into Known Icing, and if not determine best practices for unexpected icing.
Week 8	Midterm Exam	500NM Cross Country flight plan
Week 9	Commercial Cross Country Regulations	Determine if you are legally able to perform 5 different flights as designated by the instructor

Week	Topic	Reading and Assignments
Week 10	Commercial Weight and Balance Control	Given specific weights of a mixture of cargo and passengers determine if you are within performance limitations of your aircraft for a Cross Country Flight
Week 11	ATC Communications	Air Traffic Control request and response practice
Week 12	Instrument Flight Planning	Create a simulated instrument flight plan taking into account weather, airspace, icing, alternate requirements and any other considerations
Week 13	Special Flight Rules Area's	Receive Training in the Washington DC SFRA and receive qualification to fly in the vicinity of Washington DC
Week 14	FCC Restricted Operator Permit	Review when an FCC Operator permit would be required
Week 15	Final Exam	Plan a minimum 2,000NM Cross Country flight accounting for weather, fuel, weight and balance, regulations, and anything else that may be relevant.

Disclaimer: Course schedule, topics, evaluation and assignments may be changed at the instructor's discretion.

Course Policies and Resources

Attendance is mandatory per the Federal Aviation Administration and Training Course Outline. If the student cannot attend class (excused or unexcused), it is the student's responsibility to meet with the primary instructor to make up the lesson. If students cannot meet with the primary instructor during office hours or by appointment, an additional flight instructor from First Flight Aviation can be used to cover the missed lesson(s) for a fee of \$45/hr. In the event lessons cannot be completed before the beginning of the next stage, the student will be unable to continue ground and/or flight training until the requirements of the previous stage are met. Failure to complete missed lessons within 1 week after the end of stage will result in a meeting with either the Primary Instructor, Chief Flight Instructor, or Program Director to discuss continuation or the possible removal from the flight program.

In order to complete various stages of flight and ground training, a written endorsement must be provided by a Certified Flight Instructor. The nature of that endorsement requires that the instructor is confident the student can pass that stage of training (FAA Written, Solo Flight, Check Ride, etc). **The Flight Instructor reserves the right to withhold their endorsement for any reason.**

Program or College Policies and Resources

Students are expected to comply with the ethical standards of both Wright State University and First Flight Aviation. Improper language and behavior in class or at the airport can be grounds for separation from the program. As pilots, we are expected to maintain a level of decorum appropriate to our positions and responsibilities.

Students are required to complete this course with a C or better in order to enroll in AVI 2301 Commercial Pilot Ground 2.

University Policies and Resources

Disability Services <http://www.wright.edu/disability-services>.

Students registered with the Office of Disability Services who require special accommodations for lecture, lab, testing, or to complete the requirements of this class, should contact the instructor as soon as possible so arrangements can be made. Additional help and information is available at Office of Disabilities Services (Dayton Campus) or Academic Instructional Services (Lake Campus)

Academic Integrity

<http://www.wright.edu/students/judicial/academic-integrity-student-guide.pdf>

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Wright State University adheres to all applicable state and federal equal opportunity /affirmative action statutes and regulations.

The Office of Equity and Inclusion (OEI)

The OEI exists to provide an inclusive, equitable, working, living, and learning environment for members of the Wright State University community. OEI is responsible for compliance with federal and state law as well as University policy regarding equity and equal employment opportunity in personnel matters and university issues of harassment and discrimination, including relationship violence and sexual misconduct. Specifically, OEI is tasked with investigating and resolving complaints related to violations of the University Non-Discrimination Statement as well as the Gender Based Harassment and Violence Policy. All members of the WSU community, guests, and visitors are protected by these policies regardless of their sexual orientation, gender identity, or gender expression. For more information, please visit www.wright.edu/oei.

Sex/Gender-Based Harassment

Wright State University is committed to maintaining a safe and healthy educational and work environment in which no member of the university community is, on the basis of actual or perceived sex, gender, gender identity, gender expression and or sexual orientation, excluded from participation in, denied the benefits of, or subjected to discrimination in any university program or activity. Wright State University does not discriminate on the basis of sex or gender in its education programs and activities. Sex/Gender-based harassment and violence, including sexual violence, are forms of sex discrimination in that they deny or limit an individual's ability to participate in or benefit from university programs or activities.

**Commercial Pilot Flight I
Wright State University
Department of Kinesiology and Health
AVI 2202**

Instructor Information

Name - Click or tap here to enter text.

Contact Information

EMAIL: Click or tap here to enter text.

OFFICE: Click or tap here to enter text.

OFFICE HOURS: Click or tap here to enter text.

Course Information

Course Meeting Details – TBD Flight Lessons. First Flight Aviation, Dayton-Wright Brothers airport.

Schedule Type – Face to Face (F2F), Lecture, Lab

Additional Course Requirements

- Minimum age 18 years old
- English proficient
- Minimum FAA 3rd Class Medical Certificate
- Corequisite course with AVI 2201 Commercial Pilot Ground 1

Course Catalog Description – Aeronautical knowledge and experience. Conduct advanced cross-country flight training in accordance with Commercial Pilot flight training requirements. Must be a United States citizen.

Course Description – AVI 2202 Commercial Pilot Flight 1 is the first in a series of two courses designed to provide the cross country flight experience necessary to adequately prepare the student for AVI 2302 Commercial Pilot Flight Lab 2. Flight Labs will cover cross-country flight planning, refueling procedures, night operations, human factors, crew resource management, aircraft systems, aviation meteorology, and aviation safety. Flights are scheduled in 3+ hour time blocks depending on the length of the flight. Students will coordinate with their specified flight instructor separate from lecture times in order to organize each individual flight mission.

Credit Hours – 1

Repeatable for Credit? No

Prerequisite Course(s) – AVI 2101 Instrument Pilot Ground grade of C or better, AVI 2102 Instrument Pilot Flight Lab

Corequisite Course – AVI 2201 Commercial Pilot Ground 1

Enrollment Restriction(s) – No international students accepted at this time. Enrolled in the Aviation Science and Technology program.

Course Attributes - This course is a competency based educational program.




Course Learning Objectives – Students enrolled in this course will learn to:

- Build in-depth cross-country flight plans with a focus on commercial operations.
- Demonstrate a cross-country flight, including fuel limitations, weather forecasting, airport operations and regulatory considerations.
- Collaborate with other pilots and instructors on long distance and multi-day flights.

Course Learning Outcomes – As a result of their learning experience, students successfully completing this course can:

- Build in-depth cross-country flight plans with a focus on commercial operations.
- Demonstrate a cross-country flight, including fuel limitations, weather forecasting, airport operations and regulatory considerations.
- Collaborate with other pilots and instructors on long distance and multi-day flights.

Required Course Materials

<p>iPad / iPhone Must be an iOS compatible device Must be GPS / cellular service capable Cellular provider not required</p>	
<p>ForeFlight Subscription software • Recommend Pro, \$240/yr iOS compatible only</p>	
<p>Title: FAR/AIM 2023 * ISBN: 978-1-64425-212-3 Author: Federal Aviation Administration / Aviation Supplies and Academics Publisher: Aviation Supplies and Academics Edition: 2023</p>	

* Marked books are available FREE via faa.gov website

Evaluation of Students

Course Assignments

Completion of Commercial cross-country flight experience as per Federal Aviation Regulations and First Flight Aviation Training Course Outline.

Grading System – Pass / Unsatisfactory

Course Content, Weekly Course Outline and Activities

Week	Topic	Reading and Assignments
Week 1	Day Time Dual Cross Country Flight	Complete at least a 150NM Cross Country flight with your instructor and review proper Cross Country Flight procedures.
Week 2	Night Local Flight	Complete a local flight at night with your instructor and review nighttime flying procedure and best practices
Week 3	Night Cross Country	Complete a Cross Country flight of at least 200NM to a towered airport with your instructor
Week 4	Solo Local Night Flight #1	Complete 5 take offs and landings at a local towered airport at night-time. Flight must be a minimum of 1.5 hours
Week 5	Solo Local Night Flight #2	Complete 5 take offs and landings at a local towered airport at night-time. Flight must be a minimum of 1.5 hours
Week 6	Night Cross Country Solo	Complete a Cross Country flight at night with at least one leg being a minimum of 150NM
Week 7	Cross Country Flight #36	Complete a cross country flight of at least 250NM total with at least one stop at an airport within a Bravo Airspace (i.e., Burke Lakefront, Midway, Lunkin, etc.)
Week 8	Cross Country Flight Lesson #37	Complete a Cross Country flight of at least 400NM total with one leg of the flight being at least 250NM
Week 9	Cross Country Flight Lesson #38	Complete a cross country flight that requires you to either navigate around Chicago's Class B Airspace or get clearance through it. One leg of flight must be >300NM
Week 10	Cross Country Flight Lesson #39	Complete a cross country flight to KGKT taking into special consideration the differences between flying in Ohio and flying in the Mountains of Tennessee
Week 11	Cross Country Flight Lesson #40	Complete Cross Country Flight from KMGY to KPAM and return to KPAM taking legal flight time requirements into consideration.

Week	Topic	Reading and Assignments
Week 12	Cross Country Flight Lesson #41	Complete a flight from KMGY to KMEM then go from KMEM to KBNA and back to KMGY
Week 13	Cross Country Flight Lesson #42	Complete flight from KMGY to KIAG and back to KMGY
Week 14	Long Cross-Country Flight Lesson #43	Complete an extended Long Cross-Country flight from KMGY to an airport of your choice that is at least 400NM from original point of departure. Must have three stops and one leg of at least 250NM
Week 15	Commercial Flight Lab Stage 1 Check	Fly with an instructor on a simulated cross-country flight to ensure you understand the basics of cross country flight training.

Disclaimer: Course schedule, topics, evaluation and assignments may be changed at the instructor's discretion.

Course Policies and Resources

Attendance is mandatory per the Federal Aviation Administration and Training Course Outline. If the student cannot attend class (excused or unexcused), it is the student's responsibility to meet with the primary instructor to make up the lesson. If students cannot meet with the primary instructor during office hours or by appointment, an additional flight instructor from First Flight Aviation can be used to cover the missed lesson(s) for a fee of \$45/hr. In the event lessons cannot be completed before the beginning of the next stage, the student will be unable to continue ground and/or flight training until the requirements of the previous stage are met. Failure to complete missed lessons within 1 week after the end of stage will result in a meeting with either the Primary Instructor, Chief Flight Instructor, or Program Director to discuss continuation or the possible removal from the flight program.

In order to complete various stages of flight and ground training, a written endorsement must be provided by a Certified Flight Instructor. The nature of that endorsement requires that the instructor is confident the student can pass that stage of training (FAA Written, Solo Flight, Check Ride, etc). **The Flight Instructor reserves the right to withhold their endorsement for any reason.**

As completion of the program is reliant on factors outside of the students', college's, or flight school's control (weather, aircraft maintenance, etc), it is possible to reach the end of the semester without successful completion of flight training. In this case, you will receive a grade of incomplete (I) until flight training has concluded, whereupon the grade will be changed accordingly.

Program or College Policies and Resources

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Students are required to complete this course in order to enroll in AVI 2301 and AVI 2302.

University Policies and Resources

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complaints related to violations of the University Non-Discrimination Statement as well as the Gender Based Harassment and Violence Policy. All members of the WSU community, guests, and visitors are protected by these policies regardless of their sexual orientation, gender identity, or gender expression. For more information, please visit www.wright.edu/oei.

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**Aviation Safety and Accident Investigation
Wright State University
Department of Kinesiology and Health
AVI 2350**

Instructor Information

Name:

Contact Information

EMAIL:

PHONE:

OFFICE:

OFFICE HOURS:

Course Information

Course Meeting Details – Online

Schedule Type – Online

Additional Course Requirements

- English proficient

Course Catalog Description

Introduction to aviation safety, risk management, and the accident investigation and analysis process. Focus on concepts and tools to help identify hazards and mitigate risk to build a foundation for conducting safe flights. Introduction to the accident investigation process conducted by the Federal Aviation Administration and the National Transportation Safety Board. Integrated Writing course.

Course Description

Introduces students to aviation safety, risk management, and the accident investigation and analysis process. Focusing on concepts and tools to help identify hazards and mitigate risk, this course builds a foundation for conducting safe flights. This course will also introduce students to the accident investigation process conducted by the Federal Aviation Administration and the National Transportation Safety Board.

Credit Hours - 3

Repeatable for Credit? No

Prerequisite Course(s) – none

Corequisite Course – none

Enrollment Restriction – none

Course Learning Objectives – Students enrolled in this course will learn to:

- Utilize risk management tools and strategies to identify, assess, and mitigate risks.
- Explain concepts and strategies that aid in threat and error management to prevent an undesired aircraft state.
- Describe the statutory authority invested in the Federal Aviation Administration (FAA) and the National Transportation Safety Board (NTSB) to conduct accident investigations, and the role and purpose of each agency's investigation.
- Understand human factor errors that contribute to accidents, the types of data analyzed during investigation, and a framework for conducting investigations.

Course Learning Outcomes – As a result of their learning experience, students successfully completing this course can:

- Utilize risk management tools and strategies to identify, assess, and mitigate risks.
- Explain concepts and strategies that aid in threat and error management to prevent an undesired aircraft state.
- Describe the statutory authority invested in the Federal Aviation Administration and the National Transportation Safety Board to conduct accident investigations, and the role and purpose of each agency's investigation.
- Understand how human factors and errors contribute to accidents, the types of data analyzed during investigations, and best practices for conducting investigations.

Integrated Writing Course

This is an Integrated Writing (IW) course. Students will write a minimum of 5000 words (approximately 20 pages). A student will not be able to earn a passing grade for the course if they do not earn a minimum of a "C" average on the writing assignments. The writing assignments will make up 30% of the course grade. Students will be provided sufficient and timely graded feedback to improve upon future writing assignments.

To meet this requirement students will be required to analyze six (6) case studies. Students will be provided NTSB and FAA accident reports that detail real-world aviation accidents and will be required to accurately summarize the scenario, identify the key problems/issues, and discuss proposed recommendations and strategies that could have prevented the accident. Additional guidelines and instructions will be provided during the course and students will be provided with a grading rubric.

Integrated Writing Learning Outcomes - Students will be able to produce writing that:

- Demonstrates their understanding of course content,
- Is appropriate for the audience and purpose of a particular writing task,
- Demonstrates the degree of mastery of disciplinary writing conventions appropriate to the course (including documentation conventions), and
- Shows competency in standard edited American English

Evaluation of Students

Course Assignments

Assignment Type	Grade Distribution
Knowledge Checks	10%
Case Study Writing Assignments	30%
Midterm Exam	30%
Final Exam	30%

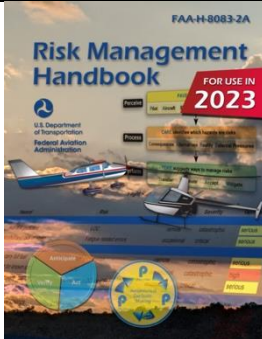

Grading System - Grades will be given out following the traditional A, B, C, D, F scale.

Grading Scale

A = 90% - 100% B = 80% - 89% C = 70% - 79% D = 60% - 69% F ≤ 59%

Course Materials

- **Required Materials**

<p>Title: FAA Risk Management Handbook * ISBN: 979-8833925843 Author: U.S. Department of Transportation, Federal Aviation Administration Publisher: Independent Published Edition: 2022</p>	
<p>Title: Investigating Human Error: Incidents, Accidents and Complex Systems ISBN: 978 - 1472458681 Author: Barry Strauch Publisher: CRC Press Edition: 2017</p>	

Note: E-Books are acceptable in place of hard copies. Books marked * are available FREE via faa.gov website.

Course Content, Weekly Course Outline and Activities

Week	Topic	Homework
Week 1	FAA Risk Management Handbook Chapter 1: Introduction to Risk Management Chapter 2: Developing Personal Minimums	<ul style="list-style-type: none"> • Read Chapter 1 and 2 • Knowledge Check 1
Week 2	Chapter 3: Identifying Hazard and Associated Risk	<ul style="list-style-type: none"> • Read Chapter 3 • Knowledge Check 2 • Case Study 1
Week 3	Chapter 4: Assessing Risk Chapter 5: Mitigating Risk	<ul style="list-style-type: none"> • Read Chapter 4 and 5 • Knowledge Check 3
Week 4	Chapter 6: Threat and Error Management	<ul style="list-style-type: none"> • Read Chapter 6 • Knowledge Check 4 • Case Study 2
Week 5	Chapter 7: Automation and Flight Path Management	<ul style="list-style-type: none"> • Read Chapter 7 • Knowledge Check 5
Week 6	Chapter 8: Aeronautical Decision-Making in Flight	<ul style="list-style-type: none"> • Read Chapter 8 • Knowledge Check 6 • Case Study 3
Week 7	Midterm Exam	
Week 8	Investigating Human Error: Incidents, Accidents, and Complex Systems Chapter 1: Introduction Chapter 2: Errors, Complex Systems, Accidents, and Investigations	<ul style="list-style-type: none"> • Read Chapter 1 and 2 • Knowledge Check 7
Week 9	Chapter 3: Analyzing the Data	<ul style="list-style-type: none"> • Read Chapter 3 • Knowledge Check 8 • Case Study 4
Week 10	Chapter 4: Equipment	<ul style="list-style-type: none"> • Read Chapter 4 • Knowledge Check 9
Week 11	Chapter 5: Operator Chapter 9: Operator Teams	<ul style="list-style-type: none"> • Read Chapter 5 and 9 • Knowledge Check 10 • Case Study 5
Week 12	Chapter 10: Electronic Data Chapter 11: Interviews	<ul style="list-style-type: none"> • Read Chapter 10 and 11 • Knowledge Check 11
Week 13	Chapter 13: Maintenance and Inspection	<ul style="list-style-type: none"> • Read Chapter 13 • Knowledge Check 12 • Case Study 6
Week 14	Chapter 14: Situation Awareness and Decision Making	<ul style="list-style-type: none"> • Read Chapter 14 • Knowledge Check 13
Week 15	Final Exam	

Disclaimer: Course schedule, topics, evaluation and assignments may be changed at the instructor's discretion.

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Psychology 1010: Introduction to Psychology

Wright State University

4 Credit Hours

Course Description: History of psychology, research methods, brain and behavior, sensation, perception, consciousness, learning, memory, cognition, language, intelligence, development, motivation, emotion, social behavior, personality, health, psychopathology, therapy, and applied psychology - e.g. industrial organizational psychology. Integrated Writing course.

Course Objectives: This Wright State Core course in Psychology is designed to help students understand the causes of human behavior. The course will consider the role of biological, dispositional, and situational factors underlying behavior and students should gain a general understanding of the origins of human behavior, as well as being able to

- (a)** Describe classic and contemporary psychological theory, concepts and findings, including those associated with the major sub-disciplines in the field. Be able to discuss psychology's role in contemporary society, its relationship to science, as well as its applications to such areas as mental health treatment, the study of workplace phenomena, and its influence of engineering and design.
- (b)** Apply knowledge of psychology theory and methods to observations, opinions, and decisions, whether personal or global in nature
- (c)** Explain and critique psychology's method of inquiry, and judge it relative to other scientific disciplines for what it reveals about the human condition
- (d)** Demonstrate an understanding of the limitations and ethical considerations associated with the acquisition of psychological knowledge and its application
- (e)** Demonstrate civic awareness in relation to education on this subject; recognize psychological phenomena associated with diversity and individuals differences across a variety of contexts
- (f)** Demonstrate the ability to learn more about this topic independently
- (g)** Student will also be expected to demonstrate some ability in communicating effectively

Text: *Psychology in Your Life, Fourth Edition*, by Sarah Grison and Michael Gazzaniga

Website: <http://www.pilot.wright.edu> The class web page contains all of the lab components, powerpoints, and the gradebook. If you go into the course, you will see various modules in the "content" tab. These modules include things to get started, my virtual office, chapters (with all needed materials), exams, and a checklist.

Wright State Core Course:

As a part of the Wright State Core, this course is part of an integrated program of courses and experiences that provides students with the breadth of skills, knowledge and understanding

expected of university graduates. A university degree goes beyond preparing graduates for a profession; it transforms their lives and their communities. The Wright State Core helps students develop the knowledge and skills essential for critical thinking, creative problem solving, meaningful civic engagement, multicultural competence, appreciation for the arts, and life-long learning. Wright State graduates will have the ability to apply insights from multiple disciplines to engage effectively with a diverse world. As part of the Wright State Core, this course shares the following objectives with other Wright State Core courses:

Wright State graduates will be able to:

1. communicate effectively
2. demonstrate mathematical literacy
3. evaluate arguments and evidence critically
4. apply the methods of inquiry of the natural sciences, social sciences, and the arts and humanities
5. demonstrate global and multicultural competence
6. demonstrate understanding of contemporary social and ethical issues
7. participate in democratic society as informed and civically engaged citizens

PSY 1010 is part of Element 5 (Social Science) of the Wright State Core. At the completion of the Wright State Core, a student will be able to do the following:

1. Critically apply knowledge of social science theory and methods of inquiry to personal decisions, current issues, or global concerns
2. Explain and critique the methods of inquiry of social science disciplines
3. Demonstrate an understanding of the ethical issues involved in the acquisition or application of social science knowledge
4. Demonstrate, from a social science perspective, an understanding of the responsibilities of an informed and engaged citizen to the success of democratic society.

Integrated Writing (IW) Course:

PSY 1010 is also designated as an IW course. Wright State students will be able to produce writing that

- Demonstrates their understanding of course content,
- Is appropriate for the audience and purpose of a particular writing task,
- Demonstrates the degree of mastery of disciplinary writing conventions appropriate to the course (including documentation conventions),
- Shows competency in standard edited American English.
- Students are expected to write informal texts, drafts, and graded drafts totaling approximately 2000 words.

- Students will receive responses to writing and have opportunities to use those responses to improve their writing.
- The criteria for evaluating writing is clearly articulated to students.

PSY 1010 achieves the goals of the IW outcomes through the following:

- Students must demonstrate understanding of course content through writing in order to pass the course. Students will be required to write in both the laboratory assignments and laboratory discussions.
- Grades for the writing components will be based, in part, on their appropriateness for an introductory level college course, on providing citations for materials used, and on competency in standard edited American English.
- Students who receive a grade deduction in any writing component will be given comments as to the cause of that point deduction. These comments can be used to help guide the student's future writing within the class. Students will not be allowed to resubmit their discussion materials for revisions. Students can resubmit lab assignments within one week of initial grading for an improved grade.

PSY 1010 is also designative a Multicultural Competency (MC) course. The expected outcome is that students will graduate with the ability to interact with others productively in their communities, jobs, nation, and the world. To fulfill this requirement, Wright State students will be able to

1. Demonstrate knowledge of cultural, economic, social, political or racial diversities in the United States or throughout the world.
2. Apply the methods of inquiry of the natural sciences, social sciences or the arts and humanities to understand cultural, economic, social, political, or racial diversity in the US or the world.
3. Demonstrate an understanding of contemporary social or ethical issues related to diversity, whether in relation to the US or the world.
4. Demonstrate skills required to engage in an informed and respectful way with diverse people, cultures, and histories of the US or the world.

For more information on the Wright State Core, please visit <http://www.wright.edu/wright-state-core>.. All Wright State Core information on this syllabus came from this source. For more information on the Writing Across the Curriculum (WAC) program at Wright State University, visit <http://www.wright.edu/writing-across-the-curriculum>.

Attendance and preparation for class are expected. **Attendance or completing a chapter review by 11:59pm of that day is required and is part of your participation grade (10%).** You are responsible for all class content and announcements **whether you are present or not.** It is important that you complete reading assignments before coming to class because lectures, discussions, and activities assume you are already familiar with the material. I may give unannounced pop quizzes if I feel students are not completing the readings prior to coming to class.

It is expected that students will read the textbook thoroughly. There is not time in lecture to cover everything discussed in the book; lectures will be used to highlight important topics and go into more depth on difficult concepts, as well as having discussions, watching video clips, etc. Lectures will also cover some material not covered directly in the book. The exams will have questions from all course

material, which includes the entire assigned textbook, all lecture and lab presentations, articles read, films, etc.

Professional behavior is expected, including demonstrating courtesy and respect for the instructor and for other students during class. This includes turning off cell phones, not reading the newspaper during class, not surfing the internet (which is distracting to classmates who are trying to pay attention), etc.

Plagiarism can occur when students take phrases or passages from books, articles, or the internet, and use them in their own papers without proper documentation. You need to take ideas and put them in your own words, and not just “string together” passages that other people have written, and then present it as your own thinking. Plagiarism can also occur when students turn in passages that are nearly equivalent to what someone else has written, with only a few words changed here or there. You don’t have to commit “word for word” copying to plagiarize – you can also plagiarize if you turn in something that is “thought for thought” the same as someone else. If plagiarism is suspected, students will be notified ASAP via the feedback for that assignment. Students will have one week to respond or the initial grade of 0 will stand. If plagiarism is acknowledged and a reasonable explanation, as determined by the instructor, is provided, a re-write – at a 35% deduction -may be granted. If there is no admission of guilt, the issue will be forwarded to a committee.

Course Components:

Text reading Assignments

Exams 45%

Writing Assignments 35%

Post-Lecture Quizzes 5%

Discussion 5%

Participation 10%

Research Requirement

Participation-10%

Participation points will be earned in the following ways..

Class Meetings (Participation)

For each class session, you are required to either:

- Attend class; or
- Complete a chapter review of the areas of the chapter covered (can only do this up to 4 times)

Concept Quiz (Participation)

Each chapter has a short concept quiz covering some main concepts in the chapter. You will have unlimited time but only one attempt. See course calendar for due dates.

Intro Forum and Overview Video (Participation)

For week 1, you will be required to post an introductory video or post and reply to 2 students . Video/text posts should contain info about yourself (major, hobbies, etc.) . See calendar for due dates. Also, you are required to view the Syllabus/Pilot Overview video.

How to use Inquizitive (Participation)

For week 1, you will be required to complete this brief introduction on how to successfully navigate inquizitive (post-lecture quizzes).

Post-Lecture Quizzes-5%

Each chapter will have a 10 post-lecture quiz over that chapter's content. You will have one attempt and unlimited time. Quizzes are due at 11:59 pm on the session due date listed in the course outline. Quizzes for each component can be found under the content tab in Pilot.

Ethics Discussion-5%

Each chapter will contain an ethics discussion question(s) based on that chapter's content. You will be required to respond in a meaningful way to each question. In this case, meaningful means that you will contribute your understanding of each issue, followed by responding to at least 2 others' answers. Discussions will be in each week's module and in the 'Communication' tab.. You cannot contribute to the discussion past the due date, but you will have unlimited time to participate before the due date. Initial discussion posts and replies are due by 11:59 pm on the dates listed in the course outline.

Writing Assignments-35%

Each week, students will complete one of the following...

Annotated Bibliography (Writing Assignments)

For the first writing assignment, find a peer-reviewed article on a topic discussed in that chapter. Then, give the APA reference citation, summarize the article, and give a sentence about how the article supports or fails to support something mentioned in the chapter. This summary should be 75-100 words. The reference citation doesn't count towards the word count. There is an example on formatting (not content) in Getting Started on Pilot. Using this as a template will help tremendously! Check out the grading rubric to see how this will be graded. ***These will be due for EVEN numbered chapters***

(except for 12; this assignment will be detailed more in Pilot).

RSVPs (Writing Assignments)

The second writing assignment will consist of 3 sections: **Respond and Summarize, Vocabulary, and Prose**. In total, this should be between 100-130 words in length

Respond & Summarize – In at least 60 words, give your initial reaction to reading what you consider to be one of the main subjects of the chapter.

Vocabulary – list and define, in your own words, 2 words from this chapter that you did not know the meaning of before reading the chapter.

Prose – Now that you have read the chapter, what are 2 thoughtful questions that have been sparked in your mind?

There is an example on formatting (not content) in Getting Started on Pilot. ***These will be due for ODD numbered chapters.***

Exams-45%:

There will be five exams and a final. The exams will cover three chapters and the final is cumulative. The five exams may have questions from any course material, which includes the entire assigned textbook, all lecture presentations, videos, activities, etc. The exams will have 60 questions (20 MC per chapter) and students will have 75 min. The final will have 75 questions (5 MC per chapter) and students will have 90 min. Students who miss any exam must contact me within two days and, if the excuse is deemed legitimate by me, will have one week to take the exams; the final CAN NOT BE MAADE UP. Exams will be online and will be due at 11:59pm on the due date. All exams have a study guide and, if completed and submitted by the exam due date, will be extra credit.

Because exams are timed, they – unlike quizzes – need to be done in a single session.

Research Participation Requirement

The Psychology Department at Wright State University believes that it is important for all students to learn about the research process in Psychology. The best way to learn about this process is through participating in actual research studies. It is the Lake Campus Psychology Department's policy that students will earn 2 credits of research experience. Failure to earn 2 research credits will reduce your final course grade by **2 percent for every missed research credit**. As an alternative to participating in actual research, students may gain this experience second hand by completing Library Review Research Papers (explained more fully below).. Students receive 1 research credit for every 30 minutes of research participation. Study participation must be completed by 11:59 pm (Eastern) Friday of finals week.

Meeting the research participation requirement does not change your overall letter grade, but can impact your grade in other ways. Failure to meet the requirements will lower your overall grade four percentage points if you don't complete either and two percentage points if only one is completed.

If you complete more than 2 research credits (for a maximum of 5 research credits total), your final overall grade will be raised by 1% for each research credit earned over the minimum. So, if you complete 4 research credits (two over the requirement), an 88% (B) would be raised to a 90% (A).

Please note that students under the age of 18 will not be able to participate in any research studies, unless they are specifically designated otherwise, as this would be a violation of research ethics according to the university's Institutional Review Board. One such study, from Dr. Ricker, will only be available to College Credit Plus students. Students who are under the age of 18 may fulfill the required credits (and extra credit) by completing alternative assignments called Library Review Research Papers (see below).

Library Review Research Paper. The alternative to participating in the required research participation is to complete reviews (1 research credit each) of research articles in an area of

psychology discussed in your text. If students are uncertain about the legitimacy of their article, they may need to consult their instructor. However, if the article is from a psychology journal and the article contains a "methods" section, students do not require instructor approval. Each review involves finding a research article from a psychology journal in the library and answering questions regarding the research on the Library Research Assignment Form (available on Pilot). Reviews will be accepted only if they are on the Psychology 1010 Library Research Assignment Form. All Library Research Assignment forms will be processed by TurnItIn to prevent student plagiarism. Reviews are due on Friday of finals week. by 11:59pm (Eastern). Any reviews turned in beyond this time will not be accepted. Papers are to be submitted via Pilot.

Ungraded Activities

In addition to each of the graded assignments listed previously, there will be ungraded activities as well. Flashcards for studying will be provided, as well as a listing of the learning outcomes for each chapter. These learning outcomes can be helpful for determining what to focus on for each chapter. Powerpoints are also available in ungraded assignments.

Extra Credit:

Occasional in-class exercises may earn bonus points. In addition, fifteen quizzes are available to you online for extra credit. Each correct question is .5 point.

Because weighted grades are difficult to manually calculate, current grades (which are automatically updated) will be available in the grades section.

Writing

Because writing is such an important part of a college education, the Student Success Center provides free writing support to all Wright State students, at any stage of your writing process and for any class. I encourage you to visit the SSC for help with any aspect of your writing, from research to revision. Sessions are available M-Th by appointment or walk-in from 9-4:30 pm and Fridays by appointment only from 9-4:30 pm. To make an appointment, stop by the SSC (182 Andrews Hall) or call 419-586-0333. For more information about the SSC, their hours, and scheduling, please visit: <https://lake.wright.edu/campus-life/student-success-center>.

Math

The Student Success Center offers free assistance to students enrolled in mathematics courses within the Wright State Catalog. I encourage you to visit the SSC for help with any aspect of math. Sessions are available M-Th by appointment or walk-in from 9:00 am-4:30 pm and Fridays by appointment only from 9-4:30 pm. To make an appointment, stop by the SSC (182 Andrew Hall) or call 419-586-0333. For more information about the SSC, their hours, and scheduling, please visit: <https://lake.wright.edu/campus-life/student-success-center>.

Office of Disability Services (ODS)

Wright State University is committed to diversity and inclusion and strives to ensure your academic journey is accessible. If you anticipate or experience disability related barriers, please contact the Office of Disability Services (<https://lake.wright.edu/campus-life/disability-services>)

| disability_services@wright.edu | 937.775.5680) to explore solutions and develop a College Accommodation Plan (CAP).

Psychology Program Objectives

Purpose: During this class the following skills will be developed. At the completion of a Bachelor's degree in Psychology, each skill below can be a line on your resume.

Students will demonstrate fundamental knowledge and comprehension of the major concepts, theoretical perspectives, historical trends, and empirical findings to discuss how psychological principles apply to behavioral problems.

Students will demonstrate basic skills in interpreting behavior, studying research, and applying research design principles.

Students will demonstrate familiarity with professional ethics in psychology.

Students will demonstrate competence in writing and in oral and interpersonal communication skills.

Students will demonstrate professional development by demonstrating competence in teamwork by working on group projects and knowledge of career options.

The Wright State 8

Purpose: The Wright State 8 was created to provide undergraduates tangible goals giving greater purpose to educational efforts while in college and more targeted preparation for success after graduation.

WS8-1	Identify and define your professional and personal goals related to psychology
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WS8-2	Develop an elevator speech to describe your interest in psychology to others
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WS8-3	Be a critical consumer of psychological information
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WS8-4	Apply basic stats and research methods to real world issues
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WS8-5	Speak and write both clearly and persuasively
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WS8-6	Dedicate time and talent to a professional organization (e.g. Psi Chi, Psych Club, MPA)
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WS8-7	Complete 2-3 learning experiences (e.g. Independent research, internship, volunteer with psychology agency)
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WS8-8	Develop professional mentors and role models
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Wright State University

ENG 2100: Research Writing and Argumentation

Instructor:

Office hours:

Email:

Core Element 1: ENG 2100 is part of Element 1 (Communication) of the Wright State Core. Outcomes for that element follow. Note that all outcomes for Element 1 may not be fulfilled by a single course.

- a. Adapt rhetorical processes and strategies for audience, purpose, and type of task
- b. Organize and produce texts that meet the demands of specific genres, purposes, audiences, and stances
- c. Employ appropriate mechanics, usage, grammar, and spelling conventions
- d. Find, analyze, evaluate, summarize, and synthesize appropriate source material from both print and electronic environments
- e. Present focused, logical arguments that support a thesis
- f. Use reliable and varied evidence to support claims, incorporate ideas from sources appropriately, and acknowledge and document the work of others appropriately
- g. Use electronic environments to draft, revise, edit, and share or publish texts

Course overview: This is a course in argumentative writing. The best way to succeed is through inquiry and analysis of a wide-ranging and balanced set of data and information. Heavily biased work or work that appears to proceed from conclusions before research and analysis is likely to be problematic. You should not be writing a report or research paper – you should develop a thesis by forming logical, reasoned conclusions based on and supported by evidence. If you're not encountering things that may challenge your opinions, you're not fully engaging in what this course has to offer. The process, briefly:

- Choose an appropriate topic and pose research questions
- Educate yourself through balanced research and reading, and narrow and focus your topic
- Form reasonable and balanced opinions supported by sound and scholarly evidence
- Organize and deliver the results clearly and precisely for readers

Online Components: This course may have online, asynchronous components instead of meeting in person for a few dates. WSU allows flexibility for up to 20% of a traditional course to be online.

Required text: *Practical Analytic Writing* (book, provided free as a .pdf)

Other necessities:

- **Microsoft Word** (or expertise to save files as Word documents). Open software files (e.g. .odt, .dot) may be inaccessible for grading or class activities. You have already paid for Word. Get it here if you need it: www.wright.edu/information-technology/proplus-free-microsoft-office#installation.
- Familiarity with and access to your WSU computer account, Pilot, and email.
- A PDF reader such as Adobe – available at www.adobe.com/products/reader.html.
- May be useful for consultation: free account at <https://zoom.us/>.

Computer & tech help: www.wright.edu/information-technology

ILA students: Students planning to apply for admission to WSU’s Graduate-Level Teacher Preparation Program must earn a grade of C or better in this course or re-take the class until a grade of at least a C has been earned. This is a requirement for admission into the graduate licensure program.

Topical relation to your field of study, research in your field, documentation style:

It is intended that for this course you should choose a topic that is in some way related to your likely major. This can be flexible. The connections between your topic and degree may be tangential. If you are unsure of your intended degree, or if you have interest in a topic outside of your degree area, ask me for guidance. Use either MLA or APA format to document sources, whichever is the better fit for your degree or the topic you have chosen.

Writing Center: <http://www.wright.edu/university-college/academic-help/writing-center>

Course grades: 1,000-point scale: 900+ = A, 800-899 = B, 700-799 = C, 600-699 = D, 599 or lower =

Weighting: All graded work is weighted and will be converted to the appropriate weight for the course grade. Essays will be graded on a 100-point scale (90+ = A, 80-89 = B, 70-79 = C, 60-69 = D, below 60 = F). Other work will be graded on a 10-pt. scale.

Graded work & point values:

Quizzes (5 x10 pts. each) 50

Test (source material) 100

Short assignments

 Research proposal 20

 Grading samples 20

 Fact Sheet 50

 Essay introduction 20

 Essay body section 20

 Draft of essay 20

Argumentative essay 700

Grading Policies

Quizzes won’t be graded automatically (immediately). Quiz grades will be released at the beginning of the class for which they are due. Grades for shorter assignments may appear fairly quickly; grades for essays will take a bit longer.

Formative vs Summative Grading – Easier points, tougher points

The essay (summative, largest part of the course grade) will be graded more rigorously than the shorter (formative) assignments for the course. Formative assignments (graded work other than the essay, test, and quizzes) are opportunities to explore and practice – at times when things may be new, not yet fully clear, and/or not ready for the precision and detail that should come in later work. Short formative assignments will be graded in part on your attempt to reasonably complete work that may lead you to a good result on the essay. Good grades on formative assignments (e.g. scores of 7-10) do not necessarily mean that you will receive similar grades on the essay, as further work may be necessary to make improvements before the final work is complete. Use formative assignments to help guide you to make improvements for a strong essay.

Additional grading policies:

- “Mystery” items that appear without previous work for them completed in class activities and assignments may not be accepted for grading.
- Essays without previous drafts and that appear unprepared may be returned without grades.
- Drafts of essays may not receive comments. I will quickly assess your attempts to write a complete and quality draft. The essay will receive substantial comments.
- Late work may receive lowered grades or not be accepted.
- The essay may be revised for a new grade after the initial grade is assigned.

Attendance: There is a strong cause-and-effect relationship between attendance and success in this course. Your course grade may be lowered one-third letter grade for each class missed beyond three, depending on circumstances. Please talk with me ASAP if you miss an excessive number of classes.

Course grade-in-progress: You can track your grades and attendance in Pilot. To determine your grade during the semester, add up your points earned and divide that by points possible. I will occasionally provide milestone grades – a function of Pilot that shows grades at a point in time. Ask me if you have questions or to request milestone grades for the class. Federal guidelines (FERPA) require that students’ grades be kept confidential.

Paper format: For consistency, format your papers in 12-point Times New Roman or Garamond, and double-space. Use 1” margins.

Sample collection: Unless you let me know otherwise, assume that I may use samples of your work from this class anonymously in other courses. If you don’t want me to use your work, please let me know.

Academic integrity & plagiarism: Plagiarism or academic dishonesty will be penalized according to University guidelines: <https://policy.wright.edu/policy/3710-academic-integrity-standards-and-process-misconduct>. WSU subscribes to a program that identifies material from other sources.

Take notes: This is a suggestion only. Taking notes during class or when viewing course material will help you remember, understand, and apply items from course materials. This is a proven process that can help you do well in any course.

Distractions: Distracting behavior or lack of respect for others may be cause for removal from the classroom. If you distract yourself in class, that’s bad. If you distract others, that’s worse. If you distract me, the whole class is affected. Ask me if you would like to hear stories of students who have severely underperformed or failed courses because of cell phones or internet browsing.

Class schedule: This schedule is live on the Pilot course homepage. Instructions, details, and links to course materials and work due are provided there.

WEEK 1	Complete before class	Class activity
M 1/9		Course intro Essay assignment & samples
W 1/11	Read PAW 1 → Quiz 1 Read Funding Ohio Public Colleges Read Research Proposal	Summary Research proposal & topic exploration
F 1/13	Read PAW 4 → Quiz 2 Read Outsourcing of Jobs	Navigating opposing positions
WEEK 2		
M 1/16		Martin Luther King Jr. Holiday – no class
W 1/18	Read PAW 5 Read PAW 2 → Quiz 3	Library search, Google Scholar
F 1/20	Read PAW 3 → Quiz 4	Reading scholarly sources
WEEK 3		
M 1/23	Read one – your choice: Bt Corn or Zika	Argument analysis
W 1/25	Research Proposal due Read PAW 6	Test review
F 1/27	Read PAW 7 → Quiz 5	Test review
WEEK 4		
M 1/30	No class meeting Test must be completed in Pilot by 3pm today	Test completed online
W 2/1	Read Fact Sheet Read one – your choice: H-1B Visa Reform or Japanese Whaling	Intro to fact sheets Argument analysis
F 2/3	Grade sample essays	Norming
WEEK 5		
M 2/6	Read one – your choice: Freud or Marijuana Rescheduling	Argument analysis
W 2/8		Applying scholarly sources
F 2/10		Figures & tables
WEEK 6		
M 2/13		Workshop & consultations – fact sheets
W 2/15	Fact Sheet & responses	Fact sheets
F 2/17	Fact Sheet & responses	Fact sheets
WEEK 7		
M 2/20	Fact Sheet & responses	Fact sheets
W 2/22	Read Learning Styles (note that essay introduction has been removed for an exercise in class)	Essay introduction & abstract exercise
F 2/24		tbd
SPRING BREAK Feb 28 – Mar 4		
WEEK 8		
M 3/6		Workshop – essay introductions
W 3/8	Essay introduction (part 1 of assignment)	Respond & review
F 3/10	Responses to essay intros (part 2 of assignment)	Intro examples, body sections
WEEK 9		

M 3/13	Essay body section (part 1 of assignment)	Respond & review
W 3/15	Responses to body sections (part 2 of assignment)	Body examples, review essay rubric
F 3/17		Workshop - draft of essay
WEEK 10		
M 3/20	Essay draft (part 1 of assignment)	Respond & review
W 3/22	Responses to drafts (part 2 of assignment)	Review drafts
F 3/24		tbd
WEEK 11		
M 3/27		Workshop & consultations
W 3/29		Workshop & consultations
F 3/31		Workshop & consultations or tbd
WEEK 12		
M 4/3	Essay due by 3pm	optional class
W 4/5		Consultations & grading
F 4/7		Consultations & grading
WEEK 13		
M 4/10	Revisions	Course grades & revision option
W 4/12	Optional: consultation in my office (443 Millett)	
F 4/14	Optional: consultation in my office (443 Millett)	
WEEK 14		
M 4/17	Optional: consultation in my office (443 Millett)	
W 4/19	Optional: consultation in my office (443 Millett)	
F 4/21	Optional: consultation in my office (443 Millett)	
FINALS		
T 4/25	Optional: revision of essay due by 3:00pm	

This syllabus and the course schedule are subject to change depending on the progress of the class and factors beyond our control.

**Commercial Pilot Ground 2
Wright State University
Department of Kinesiology and Health
AVI 2301**

Instructor Information

Name - Click or tap here to enter text.

Contact Information

EMAIL: Click or tap here to enter text.

OFFICE: Click or tap here to enter text.

OFFICE HOURS: Click or tap here to enter text.

Course Information

Course Meeting Details – TBD Ground Lessons. First Flight Aviation, Dayton-Wright Brothers airport.

Schedule Type – Face to Face (F2F), Lecture, Discussion

Additional Course Requirements

- Minimum age 18 years old
- English proficient
- Minimum FAA 3rd Class Medical Certificate
- Corequisite course with AVI 2302 Commercial Pilot Flight 2

Course Catalog Description – Aeronautical experience with a focus on knowledge needed in order to adequately prepare for the Commercial Pilot FAA written and practical exams. Must be a United States citizen.

Course Description – AVI 2301 Commercial Pilot Ground 2 is the second in a series of two courses designed to provide the knowledge necessary to pass the FAA Commercial Pilot Written Exam and will adequately prepare the student for AVI 2302 Commercial Pilot Flight Lab 2. Lectures will cover advanced systems knowledge, aviation physiology, Federal Aviation Regulations, complex aircraft systems, advanced aerodynamics, commercial maneuvers, and aviation safety.

Credit Hours – 2

Repeatable for Credit? No

Prerequisite Course(s) – AVI 2201 Commercial Pilot Ground 1 grade of C or better, AVI 2202 Commercial Pilot Flight Lab 1

Corequisite Course – AVI 2302 Commercial Pilot Flight Lab 2

Enrollment Restriction(s) – No international students accepted at this time. Enrolled in the Aviation Science and Technology program.

Course Attributes - This course is a competency based educational program.





Course Learning Objectives – Students enrolled in this course will learn to:

- Explain advanced aerodynamics, complex aircraft systems, and emergency procedures at a commercial pilot level.
- Identify the differences between private and common carriage operations.
- Collaborate with other pilots and instructors on commercial maneuver flight training.

Course Learning Outcomes – As a result of their learning experience, students successfully completing this course can:

- Explain advanced aerodynamics, complex aircraft systems, and emergency procedures at a commercial pilot level.
- Identify the differences between private and common carriage operations.
- Collaborate with other pilots and instructors on commercial maneuver flight training.

Required Course Materials

<p>iPad / iPhone Must be an iOS compatible device Must be GPS / cellular service capable Cellular provider not required</p>	
<p>ForeFlight Subscription software • Recommend Pro, \$240/yr iOS compatible only</p>	
<p>Title: FAR/AIM 2023 * ISBN: 978-1-64425-212-3 Author: Federal Aviation Administration / Aviation Supplies and Academics Publisher: Aviation Supplies and Academics Edition: 2023</p>	
<p>Title: Jeppesen Guided Flight Discovery Instrument/Commercial Syllabus ISBN:978-0-88487-656-4 Author: Jeppesen Publisher: Boeing VALID: 2006</p>	

* Marked books are available FREE via faa.gov website

Evaluation of Students

Course Assignments

Date	Subject	Percentage
Week #	Stage 1 Exam	25%
Week #	Stage 2 Exam	25%
Week #	Stage 3 Final Exam	25%
Ongoing	Homework and Quizzes	25%

Grading System – A grade of C or higher is required for this course to count as a prerequisite for corresponding AVI courses.

Grading Scale

A = 90% - 100% B = 80% - 89% C = 70% - 79% D = 60% - 69% F ≤ 59%

Course Content, Weekly Course Outline and Activities

Week	Topic	Reading and Assignments
Week 1	Aviation Physiology	Students will review some of the major effects of flight on the body and how to mitigate those effects efficiently.
Week 2	Commercial Pilot FAR's	Students will cover Federal Regulations regarding Common Carriage, Holding Out, and limitations to a commercial pilot's certificate
Week 3	High Performance Powerplants	Students will review High performance aircraft, endorsements needed to operate those aircraft and the differences between high performance aircraft standard aircraft
Week 4	Retractable Gear	Review of retractable gear, how it operates, and emergency procedures in case it fails
Week 5	Complex Aircraft Transition	Lessons from weeks 3-4 will be joined together and implemented in this week to better understand complex aircraft.
Week 6	Stage 1 Exam Advanced Aerodynamics	Will go over advanced aerodynamics of flight and into a more in-depth review of aerodynamics specifically during commercial maneuvers.

Week	Topic	Reading and Assignments
Week 7	Maximum Performance Takeoffs and Landings	Short field Take offs and landings, soft field take offs and landings, Power Off 180's and best ways to accomplish them.
Week 8	Midterm	Multiple Choice test 50 questions from most recent ASA Study Guide
Week 9	Steep Turns and Chandelles	Review Steep turns and Chandelles and the best procedures to effectively complete them
Week 10	Lazy Eights and Eights on Pylons	Review and calculate Pivotal altitude for multiple different ground speeds and create a quick reference table for them. Review lazy eights and the steps to completing the maneuver
Week 11	Steep Spirals Accuracy Landings Stage 2 Exam	Review best entrance and exit procedures for Steep Spirals, when to cycle the engine and the importance of it. Introduce Power Off 180's and how to safely and effectively complete them
Week 12	Emergency Procedures	Review proper procedures for handling an inflight emergency, introduce how to deal with the emergency with passengers on board
Week 13	Human Factors and Crew Resource Management	Review United 173 flight which resulted in a crash due to poor CRM
Week 14	Commercial Ground II Review and Test Prep	Review major points of the previous classes with special emphases on subjects likely to be tested in the end of course
Week 15	Stage 3 Final Exam	

Disclaimer: Course schedule, topics, evaluation and assignments may be changed at the instructor's discretion.

Course Policies and Resources

Attendance is mandatory per the Federal Aviation Administration and Training Course Outline. If the student cannot attend class (excused or unexcused), it is the student's responsibility to meet with the primary instructor to make up the lesson. If students cannot meet with the primary instructor during office hours or by appointment, an additional flight instructor from First Flight Aviation can be used to cover the missed lesson(s) for a fee of \$45/hr. In the event lessons cannot be completed before the beginning of the next stage, the student will be unable to continue ground and/or flight training until the requirements of the previous stage are met. Failure to complete missed lessons within 1 week after the end of stage will result in a meeting with either the Primary Instructor, Chief Flight Instructor, or Program Director to discuss continuation or the possible removal from the flight program.

In order to complete various stages of flight and ground training, a written endorsement must be provided by a Certified Flight Instructor. The nature of that endorsement requires that the instructor is confident the student can pass that stage of training (FAA Written, Solo Flight, Check Ride, etc). **The Flight Instructor reserves the right to withhold their endorsement for any reason.**

Program or College Policies and Resources

Students are expected to comply with the ethical standards of both Wright State University and First Flight Aviation. Improper language and behavior in class or at the airport can be grounds for separation from the program. As pilots, we are expected to maintain a level of decorum appropriate to our positions and responsibilities.

Students are required to complete this course with a C or better in order to enroll in AVI 3001 Certified Flight Instructor Ground.

University Policies and Resources

Disability Services <http://www.wright.edu/disability-services>.

Students registered with the Office of Disability Services who require special accommodations for lecture, lab, testing, or to complete the requirements of this class, should contact the instructor as soon as possible so arrangements can be made. Additional help and information is available at Office of Disability Services (Dayton Campus) or Academic Instructional Services (Lake Campus)

Academic Integrity

<http://www.wright.edu/students/judicial/academic-integrity-student-guide.pdf>

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Commercial Pilot Flight Lab 2
Wright State University
Department of Kinesiology and Health
AVI 2302

Instructor Information

Name - Click or tap here to enter text.

Contact Information

EMAIL: Click or tap here to enter text.

OFFICE: Click or tap here to enter text.

OFFICE HOURS: Click or tap here to enter text.

Course Information

Course Meeting Details – TBD Flight Lessons. First Flight Aviation, Dayton-Wright Brothers airport.

Schedule Type – Face to Face (F2F), Lecture, Lab

Additional Course Requirements

- Minimum age 18 years old
- English proficient
- Minimum FAA 3rd Class Medical Certificate
- Corequisite course with AVI 2301 Commercial Pilot Ground 2

Course Catalog Description – Aeronautical knowledge and experience. Complete the flight training and aeronautical experience necessary to take the FAA Practical exam and obtain a Commercial Pilot Certificate. Must be a United States citizen.

Course Description – AVI 2302 Commercial Pilot Flight 2 is the second in a series of two courses designed to provide the knowledge necessary to pass the FAA Commercial Pilot Check ride and will adequately prepare the student for a check ride with a Pilot Examiner. Flight Labs will cover commercial flight maneuvers, Aeronautical Decision Making (ADM) emergency procedures, check ride preparation and aviation safety. Flights are scheduled in 3+ hour time blocks depending on the length of the flight. Students will coordinate with their specified flight instructor separate from lecture times in order to organize each individual flight mission.

Credit Hours – 1

Repeatable for Credit? No

Prerequisite Course(s) – AVI 2201 Commercial Pilot Ground 1 grade of C or better, AVI 2202 Commercial Pilot Flight Lab 1

Corequisite Course – AVI 2301 Commercial Pilot Ground 2

Enrollment Restriction(s) – No international students accepted at this time. Enrolled in the Aviation Science and Technology program.

Course Attributes - This course is a competency based educational program.



Course Learning Objectives – Students enrolled in this course will learn to:



- Demonstrate commercial flight maneuvers as described by the Federal Aviation Regulations as well as First Flight Aviation Training Course Outline.
- Demonstrate effective knowledge of aeronautical decision making, emergency procedures, and advanced human factors that affect commercial flight operations.
- Identify the differences in systems related to Complex Aircraft and demonstrate the required maneuvers and experience required to receive a Complex Endorsement.

Course Learning Outcomes – As a result of their learning experience, students successfully completing this course can:

- Demonstrate commercial flight maneuvers as described by the Federal Aviation Regulations as well as First Flight Aviation Training Course Outline.
- Demonstrate effective knowledge of aeronautical decision making, emergency procedures, and advanced human factors that affect commercial flight operations.
- Identify the differences in systems related to Complex Aircraft and demonstrate the required maneuvers and experience required to receive a Complex Endorsement.

Required Course Materials

<p>iPad / iPhone Must be an iOS compatible device Must be GPS / cellular service capable Cellular provider not required</p>	
<p>ForeFlight Subscription software • Recommend Pro, \$240/yr iOS compatible only</p>	

<p>Jeppesen Guided Flight Discovery Instrument/Commercial Syllabus ISBN:978-0-88487-656-4 Author: Jeppesen Publisher: Boeing VALID: 2006</p>	
<p>Title: FAR/AIM 2023 * ISBN: 978-1-64425-212-3 Author: Federal Aviation Administration / Aviation Supplies and Academics Publisher: Aviation Supplies and Academics Edition: 2023</p>	

* Marked books are available FREE via faa.gov website

Evaluation of Students

Course Assignments - Complete requirements for Federal Aviation Regulations and First Flight Aviation Commercial Pilot Training Course Outline.

Grading System – Pass / Unsatisfactory

Course Content, Weekly Course Outline and Activities

Week	Topic	Reading and Assignments
Week 1	Introduction To Commercial Maneuvers	Instructor will demonstrate and student will attempt Chandelles, Steep Spirals , Steep Turns
Week 2	Intro to Commercial Maneuvers II	Instructor will demonstrate and student will attempt Eights on Pylons, Lazy Eights, and Power Off 180's
Week 3	Complex Aircraft I	Learn the basics of flying a complex aircraft and how it differs from traditional fixed gear aircraft.
Week 4	Complex Aircraft II	Perform Commercial Maneuvers in complex aircraft
Week 5	Complex Aircraft III	Continue Practice on maneuvers in Complex aircraft
Week 6	Commercial Maneuvers III	Continued Practice on Commercial Maneuvers with the addition of Stall/Spin Awareness
Week 7	Commercial Maneuvers IV	Review Commercial Maneuvers
Week 8	Commercial Flight Stage II Check	Commercial Flight Stage II Check
Week 9	Commercial Maneuvers V	Review Commercial Maneuvers/Check Ride Preparation

Week	Topic	Reading and Assignments
Week 10	Commercial Maneuvers VI	Review Commercial Maneuvers/ Check Ride Preparation
Week 11	Commercial Maneuvers VII	Review Commercial Maneuvers/Check Ride Preparation
Week 12	Commercial Maneuvers VIII	Review Commercial Maneuvers/ Check Ride Preparation
Week 13	Commercial Maneuvers IX	Review Commercial Maneuvers/Check Ride Preparation
Week 14	Stage III Check	Commercial Flight Stage III Check
Week 15	Commercial Flight Lab II End Of Course Stage Check	Mock commercial Check ride with Check Instructor, Student should treat this as an actual check ride. ****Student will not be endorsed for final check ride with DPE before passing the end of course!****

Disclaimer: Course schedule, topics, evaluation and assignments may be changed at the instructor's discretion.

Course Policies and Resources

Attendance is mandatory per the Federal Aviation Administration and Training Course Outline. If the student cannot attend class (excused or unexcused), it is the student's responsibility to meet with the primary instructor to make up the lesson. If students cannot meet with the primary instructor during office hours or by appointment, an additional flight instructor from First Flight Aviation can be used to cover the missed lesson(s) for a fee of \$45/hr. In the event lessons cannot be completed before the beginning of the next stage, the student will be unable to continue ground and/or flight training until the requirements of the previous stage are met. Failure to complete missed lessons within 1 week after the end of stage will result in a meeting with either the Primary Instructor, Chief Flight Instructor, or Program Director to discuss continuation or the possible removal from the flight program.

In order to complete various stages of flight and ground training, a written endorsement must be provided by a Certified Flight Instructor. The nature of that endorsement requires that the instructor is confident the student can pass that stage of training (FAA Written, Solo Flight, Check Ride, etc). **The Flight Instructor reserves the right to withhold their endorsement for any reason.**

As completion of the program is reliant on factors outside of the students', college's, or flight school's control (weather, aircraft maintenance, etc), it is possible to reach the end of the semester without successful completion of flight training. In this case, you will receive a grade of incomplete (I) until flight training has concluded, whereupon the grade will be changed accordingly.

Program or College Policies and Resources

Students are expected to comply with the ethical standards of both Wright State University and First Flight Aviation. Improper language and behavior in class or at the airport can be grounds for separation from the program. As pilots, we are expected to maintain a level of decorum appropriate to our positions and responsibilities.

Students are required to complete this course with a C or better in order to enroll in AVI 3002 Certified Flight Instructor Flight.

University Policies and Resources

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**Aviation Law and Regulations
Wright State University
Department of Kinesiology and Health
AVI 2375**

Instructor Information

Name –

Contact Information

EMAIL:

OFFICE:

OFFICE HOURS:

Course Information

Schedule Type – Remote Lecture, Discussion

Additional Course Requirements

- English proficient

Course Catalogue Description – Aeronautical knowledge and experience related to the economic, employment, procedural, legal, regulatory requirements and substantive rights and obligations incumbent upon members of the aviation community and 14CFR, Title 49 NTSB and TSA. Integrated Writing course.

Course Description – Aeronautical knowledge and experience related to the economic, employment, procedural, legal, regulatory requirements and substantive rights and obligations incumbent upon members of the aviation community and 14CFR, Title 49 NTSB and TSA. Integrated Writing course.

Credit Hours – 3 credit hours

Repeatable for Credit? No

Prerequisite Course(s) – None

Corequisite Course(s) – None

Enrollment Restriction(s) – None

Course Learning Objectives - Students enrolled in this course will learn to:

- Participate in the regulatory process as interested members of the aviation community;

- Protect and Exercise the rights and obligations of a crewmember or employee of an air carrier or the federal government within the United States;
- Develop basic knowledge of the operation of major air carriers and the economic regulations under which each operate;
- Analyze salient aviation legal issues through the lens of appropriate federal agencies and courts;
- Identify prior, current, and future statutes and regulations which may affect the operation of aircraft under various regulatory frameworks and state and federal agencies;
- Think critically about the role of the industry member and participate in cutting edge legal advancements as the aviation industry continues to grow;
- Develop plans for an aviation business, venture, or participant of any size to comply with federal and state law in the operation or exercise of certification privileges;
- Mitigate legal risk (civil, criminal, and administrative) and promote the safe exercise of FAA certificates;
- Comply with relevant federal laws and regulations.

Course Learning Outcomes – As a result of their learning experience, students successfully completing this course can:

- Think critically about the role of the industry member and participate in cutting edge legal advancements as the aviation industry continues to grow;
- Develop plans for an aviation business, venture, or participant of any size to comply with federal and state law in the operation or exercise of certification privileges;
- Mitigate legal risk (civil, criminal, and administrative) and promote the safe exercise of FAA certificates;
- Think critically about the role of the industry member and participate in cutting edge legal advancements as the aviation industry continues to grow;
- Develop plans for an aviation business, venture, or participant of any size to comply with federal and state law in the operation or exercise of certification privileges;
- Mitigate legal risk (civil, criminal, and administrative) and promote the safe exercise of FAA certificates;
- Comply with relevant federal laws and regulations.

Integrated Writing Learning Outcomes- Wright State students will be able to produce writing that:

- Demonstrates their understanding of course content,
- Is appropriate for the audience and purpose of a particular writing task,
- Demonstrates the degree of mastery of disciplinary writing conventions appropriate to the course (including documentation conventions), and
- Shows competency in standard edited American English

In total, students will write a minimum of 5000 words (approximately 20 pages). Typical assignments for this course may include:

- An in-depth multi-genre project reflecting various forms of writing (20-30 pages)
- An annotated bibliography of literature (5-7 pages)

- Middle level student interview with an accompanying write-up identifying text recommendations of the student (2-3 pages)
- Public Comment Assignment (2-3 pages)

Typical revising practices for a reading/writing workshop course include:

- Instructor conferencing
- Small group revisions based on common writing issues
- Peer-editing

Integrated Writing Requirements

All instructors for this course will require students to complete a variety of writing assignments (those listed above and/or others appropriate to the course). In total, students will write a minimum of 5000 words (approximately 20 pages). A student will not be able to earn a passing grade for the course if they do not earn a minimum of a "C" average on the writing assignments. The writing assignments will make up a minimum of 30% of the course grade.

All instructors for this course will allow opportunities for writing improvement by utilizing the typical revising practices listed above and/or others appropriate for the course. Students will have opportunities to revise assignments before assignments are due (e.g., from instructor conferencing, group revisions, peer-editing) and/or have sufficient and timely graded feedback to improve upon future writing assignments.

Course Materials

- **Required Materials**
 - Case Materials (to be provided by instructor)

Evaluation of Students

Course Assignments

<i>Week</i>	<i>Subject</i>	<i>Percentage</i>
Week 3	Exam #1 (Concepts from Weeks 1–3: Sources of Aviation Law)	20%
Week 7	Exam #2 (Concepts from Weeks 4–7: Aviation Liability)	20%
Week 11	Exam #3 (Concepts from Weeks 8–11: Non-FAA Substantive Obligations)	20%
End of Semester Assignment(s)/Homework	<ul style="list-style-type: none"> • Public Comment Assignment • Final Paper 	30%

Ongoing	Attendance, Participation, Presentation	10%
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Grading System – Standard (A, B, C, D, F)

Grading Scale

A = 90% - 100% B = 80% - 89% C = 70% - 79% D = 60% - 69% F = 59% or below

Course Content, Weekly Course Outline and Activities

Week	Topic	Reading and Assignments
Week 1	Source of Aviation Law, Introduction to Concepts Federalism Model of U.S. Governance	
Week 2	Administrative Law and the FAA	Cases Provided: <i>Air Line Pilots Ass’n Int’l v. Quesada</i> , 276 F.2d 892 (2d Cir. 1960) <i>Auer v. Robbins</i> , 519 U.S. 452 (1997) <i>Kisor v. Wilkie</i> , 139 S. Ct. 2400 (2019)
Week 3	International Law Overview—Treaties ICAO’s Nine Freedoms of the Sky	
Week 4	Accidents and Incidents from Regulatory Perspective Civil Litigation and Theories of Liability	Case Provided: <i>Crosby v. Cox Aircraft Co. of Wash.</i> , 746 P.2d 1198 (Wash. 1987) (en banc)
Week 5	Criminal Jurisdiction	Cases Provided: <i>United States v. Calloway</i> , 116 F.3d 1129 (6th Cir. 1997)

Week	Topic	Reading and Assignments
		<i>United States v. Prouse</i> , 945 F.2d 1017 (8th Cir. 1991)
Week 6	Regulatory Enforcement Actions and Authority	
Week 7	Business Development Corporate and Governmental Liability Aviation Insurance	
Week 8	Economic Regulation: Constitutional Implications Economic Regulation Historical Overview Economic Regulation Current Legislation	
Week 9	Environmental Law-Noise Environment Law-Emissions	Cases provided: <i>Friends of the E. Hampton Airport, Inc. v. Town of East Hampton</i> , 841 F.3d 133 (2d Cir. 2016) <i>City of Atlanta v. United States</i> , 531 F. Supp. 506 (N.D. Ga. 1982)
Week 10	Airports Zoning and State and Local Laws Eminent Domain	Cases provided: <i>Carroll Airport Comm'n v. Danner</i> , 927 N.W.2d 635 (Iowa 2019) <i>Town of Barnstable v. FAA</i> , 659 F.3d 28 (D.C. Cir. 2011) <i>Palm Beach Cty. v. Fed. Aviation Administrator</i> , 53 F.4th 1318 (11th Cir. 2022)
Week 11	Worker's Rights: Railway Labor Act, Whistleblower Protections	
Week 12	Writing Assignment Due (first draft)	Peer Review of Writing
Week 13	Cutting Edge Advancements and Future of Aviation Law	
Week 14	Exam Review, Final Writing Assignment Due	

Week	Topic	Reading and Assignments
Week 15	Final Exam	

Disclaimer: Course schedule, topics, evaluation, and assignments may be subject to change based on instructor's discretion, substantive progress, and unforeseen circumstances or recent legal developments.

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Wright State University

PSY 3680: Aviation Human Factors

Course Description: The strengths and limitations of human cognition and performance and their role in the effective operation of human-aviation systems. Basic information processing of human operators (e.g., pilots and air traffic controllers) are studied. Scientific principles and practices that optimize the capability and safety of the human-aviation system are examined in the context of training and selection, workload and situation awareness, aviation display, automation, and teamwork.

Learning objectives: In the Psychology course (PSY 3680), students will gain:

1. Knowledge of human behavior as it relates to the field of aviation, including an understanding of thoughts, motivations, and feelings of individuals and groups, as well as how to assess these factors.
2. Begin to develop strong research skills, including an understanding of how to collect, analyze, and interpret data related to aviation psychology, as well as how to critically evaluate published and non-published information. Students will gain experience in using available resources to define goals, identify problems, and develop potential solutions.
3. Strong ethical principles as they apply to aviation psychology, including those related to work practices and to the protection of information, including how to safeguard privacy and confidentiality.
4. Ability to communicate information effectively both verbally and in written form, in a clear and concise manner. Student will be able to communicate technical (including statistical) information clearly to non-specialists and translate data into easily interpreted graphs and figures.
5. Ability to work effectively in teams, both as a member and as a leader, with others from diverse backgrounds. They will learn how to follow established protocol and response to both positive or negative feedback.
6. Strong self-management skills and the ability to define and achieve goals in unclear situations.

Learning outcomes: Upon completion of the Psychology course (PSY 3680), students will have gained mastery in:

1. Knowledge of human behavior related to the field of aviation psychology, including an understanding of thoughts, motivations, and feelings of individuals and groups, as well as how to assess these factors.

2. Strong research skills, including an understanding of how to collect, analyze, and interpret data related to aviation psychology, as well as how to critically evaluate published and non-published information. Students have basic experience in using available resources to define goals, identify problems, and develop potential solutions.
3. Strong ethical principles as they apply to aviation psychology, including those related to work practices and to the protection of information, including how to safeguard privacy and confidentiality.
4. Communicating information effectively both verbally and in written form, in a clear and concise manner. Student communicate technical (including statistical) information clearly to non-specialists and translate data into easily interpreted graphs and figures.
5. Ability to work effectively in teams, both as a member and as a leader, with others from diverse backgrounds. They follow established protocol and respond to both positive or negative feedback.
6. Strong self-management skills and the ability to define and achieve goals in unclear situations.

Course Requirements: Tentative Dates

Readings: mainly from textbook, additional materials may be assigned

Exams: multiple choice

Exam I	100 Points
Exam II	100 Points
Exam III	100 Points

Exams cover materials from the readings, lectures, and videos. Exams are to be taken during scheduled class time. There are no makeup exams unless you have a written medical excuse. Unannounced quizzes may be given in class. There are no makeup quizzes. Your course grade is based on the total number of points you receive from your three exams, bonus points from the quizzes. **Poor class attendance will result in my lowering your letter grade.**

Grading Scale

% Total Points	Grade
85-100	A
70-84	B
60-69	C
55-59	D
< 55	F

The Wright State 8: These were created to provide undergraduates tangible goals giving greater purpose to educational efforts while in college and more targeted preparation for success after graduation.

WS8-1: Develop a personal psychology mission statement.

WS8-2: Discuss 3 problems psychology has addressed.

WS8-3: Be curious and constructively skeptical.

WS8-4: Apply basic stats and research methods to real world issues.

WS8-5: Talk and write both simply and persuasively.

WS8-6: Dedicate time and talent to Psi Chi or Psychology Club.

WS8-7: Identify 3 experiential learning achievements.

WS8-8: Develop professional relationships and competencies.

ACADEMIC INTEGRITY

Dishonesty, cheating, and/or plagiarism will not be tolerated in this course. If you are caught cheating on a test, you will minimally receive an F on that test. Any instances of cheating may result in an F in the course.

Students are not allowed to use advanced automated tools (artificial intelligence or machine learning tools such as ChatGPT or Dall-E 2) on assignments in this course. Each student is expected to complete each assignment without substantive assistance from others, including automated tools.

DISABILITY SERVICES

Wright State University is committed to diversity and inclusion and strives to ensure your academic journey is accessible. If you anticipate or experience disability related barriers, please contact the Office of Disability Services (<https://wright.edu/ods> | disability_services@wright.edu | 937-775-5680) to explore solutions and develop a College Accommodation Plan (CAP).

Course outline

Part I Introduction

Week 1 Human Factors in the Human-Aviation System

Part II Human Cognition Basics

Week 2 The Information Processing Approach

The human ability to resolving ambiguities and complexity in a dynamic environment with rapidly evolving technology

Week 3 Attention and Perception

Week 4 Spatial Orientation and Disorientation

Week 5 Action Selection, Executive Control, and Nonoptimalities

Week 6 Mental Workload and Situation Awareness

The power and limits of attentional resources and memory

Week 7 Acquisition of Skilled Performance and Expertise

Week 8 The Fast and Slow Aeronautic Decision Making

Part III Optimizing Human-Aviation System Capability and Maximizing Safety

Week 9 Aviation Displays

Week 10 Automation Might and Perils

Week 11 Training and Flight Simulation

Week 12 Selection Methods and Practice

Week 13 Team Dynamics and Cockpit Resource Management

Week 14 Aviation Accidents

Examination of historic aviation accidents attributed to the lack of
human factors consideration

Week 15 Final Exam

Wright State University
PHY 1903 Physics of flight

Credit Hours: **3**

Restrictions: **N/A**

IV. Course Objectives and learning outcomes:

Students completing PHYS 1903 can:

- Characterize the historic timeline of pre-human and human flight development.
- List the types of flight and flying machines and basics of their operation.
- Explain the roles of gravity, thrust, lift, and drag force for flight.
- Describe the basics of Newtons Laws and get introduced to the concepts of acceleration.
- Relate the concepts of acceleration of free fall and how it changes with altitude.
- Relate the basics of how pressure, air density and temperature change with altitude.
- Describe the concept of drag force and its importance for flight.
- Describe the causes of lift-force and associated wing geometry.
- Discuss the most important flight control components of an aircraft.
- Discuss the types of engine that facilitate flight and associated concepts of energy conservation and fuel types.
- Develop deeper understanding of combined force diagram in relation to flight.

Course Learning Objectives

Students enrolled in PHYS 1903 will learn:

- To characterize the historic timeline of pre-human and human flight development.
- The types of flight and flying machines and basics of their operation.
- The roles of gravity, thrust, lift, and drag force for flight.
- How to describe the basics of Newtons Laws and get introduced to the concepts of acceleration.
- How to relate the concepts of acceleration of free fall and how it changes with altitude.
- The basics of how pressure, air density and temperature change with altitude.
- The concept of drag force and its importance for flight.
- The causes of lift-force and associated wing geometry.
- The most important flight control components of an aircraft.

- The types of engine that facilitate flight and associated concepts of energy conservation and fuel types.
- To develop a deeper understanding of combined force diagram in relation to flight.

Textbook: Principles of Aerospace engineering, OpenStax College Physics Vol. I

Class website: Pilot (other useful websites and resource material will be updated to Pilot as necessary) Check Pilot daily as course material will be updated often.

Necessary changes to the syllabus will be made throughout the semester as needed.

Topics covered:

This course will discuss some of the fundamental theories underlying modern science... By the end of this course, you should be familiar with the following:

- Vectors and their necessary application to the solution of physical problems.
- Newton's Laws and how to determine the characteristic motion of a body influenced by varying types of forces.
- Solving problems using the concepts of work and energy.
- Momentum (both linear and angular).
- Rigid body rotation and oscillatory motion.
- History of flight.
- Type of flight. Rockets, Airplanes, Helicopters. Gliders would not work without sun? Air balloons. Buoyant force.
- Gravity. Force Diagrams. Newtons Laws. Universal law of gravity. Acceleration of free fall (change with altitude). Weight.
- Tools to help with calculations.
- Pressure, density, temperature. Stratification of the atmosphere. Air cabin pressure in flight.
- Drag. Associated force diagrams. Another perspective on flight.
- Lift. Can there be lift without drag?
- Control surfaces. Wings, flaps, elevators, rudders. Associated force diagrams. Balanced aircraft, center of mass importance.
- Thrust. Engine types. Propeller, reactive, ionic thrust engines. Battery powered airplanes. Solar powered drones. Work and energy conservation. Airplane fuel consumption. Rocket fuel consumption. Thermodynamics of engine fuel. Can airplane fly on battery power? Biofuels.
- Detailed force analysis of flight. Acceleration and Newtons second law. G-force.
- Measurement of air speed. Pressure gauges. GPS.

- Human performance in flight. Fatigue. Hypoxia. Sight in high g.
- Types of engines for space travel. Space distances. Aerodynamics in space. Debris and high-speed collision. Faster than light of speed travel.

These objectives describe a basis for understanding the nature of scientific inquiry and developing the skills to critically apply knowledge of scientific theory and methods of inquiry, to evaluate information from a variety of sources.

You will be expected to apply critical thinking, using the topics outlined above, to derive meaningful solutions to given problems. This structuring of your solutions will allow you to demonstrate to me an effective understanding of basic physical principles.

Lecture

In general, the lectures are designed to supplement as well as help clarify material covered in the text. Most of the lecture will be spent reviewing and practicing problems. To derive maximum benefit from the lectures you should read the assigned material beforehand and try to answer two questions – “what new quantities are being defined and what are the main points being stressed?”

Grading

Homework assignments: Homework will be posted as documents (pdf files) on the course page. All homework assignments will be submitted electronically through the course Dropbox system. Homework is typically assigned on a class-to-class schedule. Consult the course schedule for due dates/times.

Exams (3 of them): (2 Regular and the Final) We will try to move at a pace of about 1.5 chapters a week. The best way to prepare for exams is (but not limited to) consulting other textbooks for extra problems outside of those assigned. Attending office hours, seeking help in the Physics helproom. Asking me for help when stuck... Don't wait until the day before the exam to disclose that you don't know something! In Class/Take home assignments: These are problems assigned as in class work or problems assigned outside of class (these are different from homework). I will use the standard grade scale to determine final scores. You can keep track of your overall points on the course Pilot page. Your standing in the course is determined by your current points total divided by the total number of possible points.

Missing Class

It is not advisable for you to miss class. I do post course materials; solutions examples, etc. on the course page but this is not a direct substitution for live instruction. Class time gives you the opportunity to ask questions as you have them and consult with me directly. Ultimately it is the responsibility of the student to make sure they are up to date with course material, in relation to

the class, and to complete and turn in work on time. If personal issues (medical, family, etc.) arise, I need to know as soon as possible. Missed assignments (including exams) cannot be made up after deadlines. If I have enough prior notice, I can make arrangements for make-ups, otherwise the assignment(s) will be counted as late with either minimal or zero points awarded. As with the current worldwide health situation I know unexpected situations can arise without warning. If you do suddenly become ill with COVID-19, please inform me and the University immediately (you can find the self-reporting procedures on the University website). This will let me, and the University, know that special accommodations will need to be made for attendance and assignment submission.

Community Standards and Student Conduct

It is the policy of Wright State University to uphold and support standards of personal honesty and integrity for all students consistent with the goals of a community of scholars and students seeking knowledge and truth. Furthermore, it is the policy of the University to enforce these standards through fair and objective procedures governing instances of alleged dishonesty, cheating, and other academic misconduct. The full article can be read here:

<https://www.wright.edu/studentaffairs/student-life/community-standards-and-student-conduct/code-ofstudent-conduct/section-xii-academic-integrity>

In short, don't cheat. I have no problems with students working together. on homework or out of class problems. During exams however, you will not be allowed to consult with others or any materials outside of what I allow.

Course Schedule

The course schedule will be updated based on the sections of the chapters we cover, and any assignments posted. You will find this schedule in a module on the course page. Text in red are examples/solutions which you should consult for homework help or self-study. Adjustments to the course schedule will be updated as needed, check Pilot and your email for any updates to the course material.

Class offering*

If the University decides that the course offering must be changed, we will have to quickly shift from in person to online instruction. I will inform the class of how the course changes will be implemented. While this should not directly affect our class, it may be relevant to your other courses.

V. Suggested Course Materials (required and recommended)

Lecture, Videos and Textbook

VIII. Suggested Grading Policy

A final course letter grade is earned based on a percent of the total evaluated work per course policy.

IX. Suggested Assignments and/or Course Topics Outline

Week

1. History of flight.
2. Type of flight. Rockets, Airplanes, Helicopters. Gliders would not work without sun? Air balloons. Buoyant force.
3. Gravity. Force Diagrams. Newtons Laws. Universal law of gravity. Acceleration of free fall (change with altitude). Weight.
4. Tools to help with calculations.
5. Pressure, density, temperature. Stratification of the atmosphere. Air cabin pressure in flight.
6. Drag. Associated force diagrams. Another perspective on flight.
7. Lift. Can there be lift without drag? Pressure above and wing.
8. Control surfaces. Wings, flaps, elevators, rudders. Associated force diagrams. Balanced aircraft, center of mass importance.
9. Thrust. Engine types. Propeller, reactive, ionic thrust engines. Battery powered airplanes. Solar powered drones. Work and energy conservation. Airplane fuel consumption. Rocket fuel consumption. Thermodynamics of engine fuel. Can airplane fly on battery power? Biofuels.
10. Detailed force analysis of flight. Acceleration and Newtons second law. G-force.
11. Measurement of air speed. Pressure gauges. GPS.

12. Human performance in flight. Fatigue. Hypoxia. Sights in high g.

13. Types of engines for space travel. Space distances. $E=mc^2$, black hole drive, antiparticle drive, nuclear fusion/fission drive, solar sail, electromagnetic beam sail drive. Vacuum in space. Air dynamics in space. Debris and high-speed collision. Faster than light speed travel. Expansion of the universe.

14. The future of human flight

15. Final Exam