

Course Syllabus

COURSE NAME: Intermediate Flight II (SE) Revision 0

COURSE NUMBER: PP-P254

CREDIT HOURS: 2 CREDIT HOURS

SCHEDULE: TBA

CLASSROOM: Center for Aviation Science

INSTRUCTOR: Saul Robinson

OFFICE LOCATION: CAS

PHONE: 314-977-9546

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Required text and materials:

- | | | |
|-----------------------------------|--|-----------------------------|
| 1. Flight Operations 4 book | 7. Current Area Chart | 11. Timer |
| 2. FAA Instrument Flying Handbook | 8. Current FAR/AIM | 12. Flashlight |
| 3. Airplane Flying Handbook | 9. Gleim Commercial Pilot Knowledge Test Study Guide | 13. Current Sectional Chart |
| 4. PA44 PIM | | 14. Current Terminal Chart |
| 5. Current Illinois IAP | 10. Current Commercial Pilot PTS | 15. Logbook |
| 6. Current L21 Chart | | 16. Headset |

Description: This course is the fourth in the flight training sequence. The safe operation of a Single engine airplane, including normal and emergency operations in visual and instrument conditions, is included.

Prerequisite: PP-P210

Co requisites: PP-P250

Parks College of Engineering and Aviation Learning Outcomes

The following learning outcomes have been developed to support the Five Dimensions of the Saint Louis University Experience.

1. Ability to communicate effectively with written and oral communication skills.
2. Ability to use computer skills.
3. Ability to apply mathematical concepts in solving problems.
4. Ability to apply scientific principles in finding solutions to problems.
5. Ability to appreciate faith and spirituality.
6. Ability to appreciate philosophy and/or ethics for personal growth.
7. Ability to appreciate service to others and society.
8. Ability to integrate knowledge for capstone experiences.
9. Ability to appreciate cultural diversity in community building.

Parks College Mission Statement:

Within the context of the total mission of Saint Louis University, the basic mission of Parks College is to prepare students for careers in aviation, engineering, science, technology, and related fields. Satisfying this mission requires joining applied technology and traditional academics with an emphasis on excellence. The aim of these efforts is to help student to:

- Mature intellectually;
- Remain abreast of advances in technology;
- Learn about themselves and their world; and
- Develop as whole persons adaptable to change.

Parks College of Saint Louis University, 2005

The Mission of the Department of Aviation Science is to actively engage in the fulfillment of the University's mission so that our students are formed as global citizens who are intellectually, technically, and ethically prepared to be responsible leaders in their profession and their community.

Aviation Science, 2005

Goals of the Flight Science Program

KNOWLEDGE. Graduates of the Flight Science program will **demonstrate** broad knowledge in the following fundamental subject areas:

Mathematics; Physics; Chemistry; Philosophy; Psychology; Theology; Ethics; English Composition & Literature

Graduates of the Flight Science program will **demonstrate** their ability to build upon their fundamental knowledge in mathematics, sciences, and liberal arts to **analyze, synthesize, and evaluate** contemporary problems in the Flight Science domain. The overall areas covered in the program include the following:

Professional Orientation; Aircraft Design, Operation, and Maintenance; Aviation Safety and Human Factors; National and International Aviation Law and Regulations; Airports, Airspace, and Air Traffic Control; Meteorology and environmental issues; Aerodynamics; Incident/Accident Investigation; Advanced Aircraft Systems; Air Charter and Air Carrier Operations; Flight Deck Automation; Corporate Aviation Management; Economics of Air Transportation; Culminating Senior Project; and a Cohesive Set of Approved Electives (a minor or a certificate is strongly encouraged).

SKILLS. Graduates of the Flight Science program will **demonstrate** proficiency in the following skills:

1. **Aircraft piloting** skills to achieve a Commercial Pilot Certificate with Instrument and Single engine Ratings.
2. Oral, written and team **communication** skills to plan, execute, and present team projects in a peer-review setting.
3. **Research** skills to collect data via appropriate literature searches, apply appropriate analytical techniques, synthesize professional-quality reports, and present the research results.
4. **Critical thinking** and **analytical** skills to solve problems.
5. **Decision-making** skills to evaluate and proactively resolve flight-related challenges.
6. **Team building** skills that apply interpersonal communication skills and decision-making skills to resolve conflicts, manage challenges, and build high-performing teams.

ABILITIES. In general, graduates of the Flight Science program will have the ability to succeed in life, regardless of their chosen career field. They will **demonstrate** the following key abilities:

1. They will be able to **learn to learn**; therefore, they will be able to acquire new knowledge, solve new problems, and adapt to new environments.
2. They will maintain their **curiosity** for new knowledge, their **imagination** for innovative solutions, and their **creativity** in applying their knowledge and skills in novel ways.
3. They will develop their ability to **self-motivate** and **dedicate** themselves to every endeavor with **passion**.
4. They will apply **sound ethical judgment** in their personal and professional lives marked by integrity and trust.
5. They will strive to **serve others** in the personal, professional, and communal responsibilities.

ATTITUDE. Ultimately, the graduates of the Flight Science Program are products of a Jesuit university. As such, they will **demonstrate** the following attitudes:

1. They will **respect the universality**—the inclusiveness—of a variety of intellectual disciplines that synergistically enrich each other as well as the multitude of spiritual paths that open one's mind to the transcendent.
2. They will strive toward service to their fellow human beings as **men or women for others** and in so doing, they will strive to apply prepared to be their technical knowledge and skills for the betterment of humanity.
3. Always give more – **MAGIS**. These graduates will be whole-heartedly charged to make a contribution toward their family, their organization, and their society—they will be inspired to choose to **do what is most needed** among the multitude of things that they are trained, skilled, prepared, or gifted to do.

Aviation Science, 2005

Additional Course Information

Course methodology: Lecture, problem-based learning, scenario based training, Flight training device, PC based flight simulation, Dual flight instruction, solo flight. Successful students will have read and studied advance assignments prior to the scheduled class session.

Course objectives: The expectations of a student in terms of knowledge, value and skills when the course is completed.

1. To provide a knowledge of basic pilot skills.
2. To develop a safe, competent pilot with the fundamental background of knowledge and skill necessary to progress to sophisticated aircraft and employment as a pilot.
3. To develop sound aeronautical decision-making skills.
4. To provide the student with flight training in preparation for the Federal Aviation Administration examinations at the Commercial pilot certification.

Completion Standards. To successfully meet the knowledge and flight requirements for the Commercial pilot certificate as prescribed in the Training Course Outline (TCO) for Flight Operations 4 under FAR part 141

A comprehensive final exam will be administered upon completion of the entire course. This exam will ensure that the student has the necessary understanding and flight training to attain a FAA Commercial pilot certificate.

Learning Outcomes. The accomplishments of a student completing this course in terms of specific knowledge, value and skills. *See individual Module Completion Standards.*

Flight Operations Manual. In order to ensure a safe and effective learning environment all persons while present at the Center for Aviation Sciences will remain in compliance with the most current version of the Flight operations Manual (FOM). A current copy of the FOM is available from the CAS dispatch office or on the AvSci website. All student prior to the commencement of a flight course are required to sign a statement attesting to their understanding and intent to comply with the rules and regulations laid out by the current FOM.

Tutoring Center. The tutoring center is available to all students at SLU requiring any academic assistance

**Academic Resources Center: Room 016
977-3319**

The tutoring center employs an ASPP student to serve as a teaching assistant for this class. It is strongly recommended that students take advantage of this service, not only for making up absences and in preparation for exams, but whenever the need for additional assistance with the material is needed.

GENERAL OUTLINE:

	DUAL Training								SOLO Practice										
	S.E.	S.E.	Multi-Engine	X-C	X-C	Local	Local	Inst.	S.E.	S.E.	X-C	X-C	Local	Local	Other	Total	PC-	Flight Training	Brief
	Non-Complex	Complex		Day	Night	Day	Night	Ref.	Non-Complex	Complex	Day	Night	Day	Night	Airplane	Trainer	Device	Time	
Time Required for Course Completion	9.0	19.3		2.0	2.0	24.3	0	4.0	15.0	6.0	5.0		11.0	5.0		49.3		2.4	17.9
Maximum provided by flight fees	10.0	20.3							16.0	7.0					53.3	N/A	3.4	90.0	

Course Objectives:

- Preflight preparation
- Preflight procedures
- Airport operations
- Takeoffs, landings and go-arounds
- Performance maneuvers
- Ground Reference maneuver
- Navigation
- Slow flight and stalls
- Emergency Operations
- High altitude operations
- Postflight procedures

Stage 1

When the student completes this stage, the student will be able to successfully complete the Complex stage check to the standards listed on lesson 27 of the IF2(SE) book.

Stage 2

When the student completes this stage, the student will be able to successfully complete the Commercial Single engine stage check to the standards listed on lesson 38 of the IF2(SE)book.

Flight Fees

Flight fees cover student expenses up to the maximum values listed above. Training required beyond these limits will result in the student accruing addition charges. These charges will be assessed by the Bursars Office. It is the student's responsibility to review the invoices produced by the dispatch office following each lesson.

FAA Practical tests are not part of the flight syllabus and are not covered by flight fees.

Teaching Methodology

Flight Instruction

During flight lessons the instructor will demonstrate and explain relevant flight skills, then allow time for the student to practice and perform the skill. The instructor will clearly specify what the student will be able to do after completion of the training. Each flight lesson will be at a level that challenges the student but that does not exceed that student's ability. The instructor will seek active student response to training in order to provide immediate feedback in the form of an assessment

Problem-based Learning (PBL) / Scenario Based Training (SBT)

What is problem-based learning? It addresses directly many of the recommended and desirable outcomes of a professional pilot's education: specifically, the ability to do the following:

- Think critically and be able to analyze and solve complex, real-world problems
- Find, evaluate, and use appropriate learning resources
- Work cooperatively as flight crew
- Effectively resolve in-flight and ground based problems
- Demonstrate versatile and effective communication skills
- Use content knowledge and intellectual skills acquired at the University to become continual learners

You will be presented with scenarios relevant to the application of skills as a pilot. The problems will be engaging and relate to real-world situations. The process requires you to make decisions based on facts, information and reasoning. Some problems will be multi-stage with additional material provided as information is obtained. They will be complex enough to lack obvious solutions. The problems may be open-ended, ill-structured to resemble the nature of problems as they occur in the flight environment. Concrete enough for you to investigate thoroughly but narrow enough for you to grasp important details; to generate multiple hypotheses. It will promote critical thinking skills and effective behaviors as a professional pilot.

Lecture / Ground Training

Traditional lecture is also used in this course. Handouts are issued liberally and available on the AvSci website.

Stage Checks

The stage check that occurs at the end of this course is designed to evaluate a student's competency at the Commercial Pilot Certificate level. The stage check comprises of both an oral and flight evaluation. Grades from this evaluation will form part of the student's final grade for the course.

Quality Control Program

At any point during a semester students may receive a formative assessment with a check instructor designated by the Chief Instructor. The check instructor will review the previous training received by the student and their progress within the current module. Based on this information the check instructor will formulate and conduct an assessment. The objective of this assessment is to aid in the learning process and provide feedback to both student and instructor. If the check instructor determines that the student has not made sufficient progress within the current flight training module to succeed in the end of module exam, he/she may require the student and instructor to conduct remedial training.

Grade / Assessment Determination

Student performance is measured through objective testing and positive classroom participation including attendance. The final grade will be based on the following:

Item	Weight	Grading Scale
Attendance	20%	A 90% - 100%
Stage Check Performance	40%	B+ 85% - 89%
Flight Hours Accumulated	20%	B 80% - 84%
General Lesson Performance	20%	C+ 75% - 79%
		C 70% - 74%
		D 60% - 69%
		F ≤ 59%

Under a FAR part 141 training school the Federal Aviation Administration requires that failure to achieve at least 70% final grade in this course requires that the student retake the entire course

Students are required to complete the entire course prior to passing grade issuance.

Attendance

Scheduled Training Activities Missed	Attendance Grade (%)
1	100
2	80
3	60
4	0
5	AF grade issued in the course

Class attendance is mandatory. All students are expected to be in class at the scheduled start time and properly prepared for each class session. Attendance is documented by the instructor; frequent tardiness or absenteeism will have a negative impact on the final grade. Any student missing a test, stage check, or quiz because of tardiness or unexcused absence will not be permitted to make-up the test or quiz and will receive a point value of zero for the test or quiz missed. Approved absences include death in the immediate family, personal illness certified by a physician, or absences resulting from participation in official college activities that are approved by the Dean through a letter to the instructor.

Course requirements: Computers: Students must have access to computer equipment to explore selected web sites for class preparation and completion of some assignments. Students are expected to check both email and the AvSci website a minimum of every 24hrs. This is to ensure that students are aware of schedule or policy changes that may affect their flight training.

Tests: The test material will be taken from the text, supplemental reading assignments, handouts, videos, as well as from the material covered in instructional sessions, flight lessons, guest presentations, student presentations, and discussions.

Students with disabilities who believe that they may need accommodation in this class are encouraged to contact the office of disabilities services at 314-977-2930 as soon as possible to ensure that such accommodations are implemented in a timely fashion.

Additional Notes. It is Parks College policy that no food or drink be brought into the classroom/aircraft.

CELL PHONES and PAGERS: As a courtesy to the instructor and other students, pagers and cell phones must be “off” or set to “silent” or “vibrate” modes during the ground session. Noise interruptions of this nature during ground sessions *will not be tolerated* by the instructor. *During flight lessons students are legally required to turn off cell phones and any other electronic devices.*

Sample Online Data Sources

Aviation related web sites should be visited by the student.

<http://avsci.slu.edu/>

<http://adds.aviationweather.noaa.gov/>

<http://www.weather.com/>

www.duat.com

www.faa.gov

www.faasafety.gov

www.nts.gov