

Course Syllabus

COURSE NAME: Intermediate Flight I Rev 1
COURSE NUMBER: **PP-P210**
CREDIT HOURS: **2 CREDIT HOURS**
SCHEDULE: TBA
CLASSROOM: Center for Aviation Science
INSTRUCTOR: Saul Robinson
OFFICE LOCATION: **CAS**
PHONE: **Saul: 314-977-9546**
EMAIL: **robinssd@slu.edu**

Required text and materials:

- | | |
|--|---------------------------------|
| 1. Intermediate Flight I book | Study Guide |
| 2. FAA Instrument Flying Handbook | 9. Current Instrument Pilot PTS |
| 3. TB9 PIM | 10. Timer |
| 4. Current Illinois IAP | 11. Flashlight |
| 5. Current L21 Chart | 12. Current Sectional Chart |
| 6. Current Area Chart | 13. Current Terminal Chart |
| 7. Current FAR/AIM | 14. Logbook |
| 8. Gleim Instrument Pilot Knowledge Test | 15. Headset |

Description: **This course provides instruction for the application of previously learned instrument flying and navigation skills to the in-flight environment and qualifies the student for the instrument rating practical test.**

Prerequisite: **FAA Class II medical Certificate**
PP-P153
PP-P160

Co requisites: **PP-P220 Principles of Intermediate Flight I**

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 Multiengine 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

GENERAL OUTLINE:

Module 9

Module 9 Objective.

- **ADM**
- **CRM**
- **Aviation physiology**
- **IFR equipment and navigation systems**
- **Inspections and postflight procedures**
- **BAI**
- **Partial Panel**
- **Unusual attitudes and recoveries**
- **Holding procedures**

Module 9 Completion Standards. **When the student completes this Stage, the student will be able to demonstrate the required cognitive, psycho-motor, and affective proficiency listed in Module 9 of the Intermediate Flight I book.**

Time required for completion (all modules to date inclusive)	DUAL Training								SOLO Practice						Other	Total Airplane	PC- Trainer	Flight Training Device	Brief Time
	S.E. Non- Comple x	S.E. Complex	Multi- Engin e	X-C Day	X-C Night	Local Day	Local Night	Inst. Ref.	S.E. Non- Comple x	S.E. Complex	X-C Day	X-C Night	Local Day	Local Night					
Module 9	3.0			2.0		1.0		2.7	6.0		3.0		3.0			9.0	1.0	4.0	4.0
Maximum provided by flight fees	6.0																		90

Module 10

Module 10 Objective.

- **Air Traffic Control**
- **ATC Clearance**
- **ATC Restrictions**
- **Airport Environment**
- **IFR enroute charts, US terminal procedures/publications, and instrument approach charts**

Module 10 Completion Standard. **When the student completes this Stage, the student will be able to demonstrate the required cognitive, psycho-motor, and affective proficiency listed in Module 10 of the Intermediate Flight I book.**

Time required for completion (all modules to date inclusive)	DUAL Training								SOLO Practice						Other	Total Airplane	PC- Trainer	Flight Training Device	Brief Time
	S.E. Non- Comple x	S.E. Complex	Multi- Engin e	X-C Day	X-C Night	Local Day	Local Night	Inst. Ref.	S.E. Non- Comple x	S.E. Complex	X-C Day	X-C Night	Local Day	Local Night					
Module 10	11.0			6.0	2.0	2.0	1.0	9.9	11.0		7.0		4.0			22.0	2.0	7.0	10.0
Maximum provided by flight fees	17.0																		90

Module 11

Module 11 Objective.

- **IFR departure**
- **ODPs**
- **SIDs**
- **IFR enroute**
- **Weather Review**
- **Emergencies and emergency operations**

Module 11 Completion Standard. **When the student completes this Stage, the student will be able to demonstrate the required cognitive, psycho-motor, and affective proficiency listed in Module 11 of the Intermediate Flight I book.**

Time required for completion (all modules to date inclusive)	DUAL Training								SOLO Practice						Other	Total Airplane	PC- Trainer	Flight Training Device	Brief Time
	S.E. Non- Comple x	S.E. Complex	Multi- Engin e	X-C Day	X-C Night	Local Day	Local Night	Inst. Ref.	S.E. Non- Comple x	S.E. Complex	X-C Day	X-C Night	Local Day	Local Night					
Module 11	17.0			9.0	4.0	3.0	1.0	15.3	13.0		9.0		4.0		1.5	30.0	3.0	9.0	16.0
Maximum provided by flight fees	26.0																		

Module 12

Module 12 Objective.

- **IFR Arrival**
- **DME Arcs**
- **IFR Approach**
- **Terminal arrival and approach procedures**
- **IFR Flight Planning**

Module 12 Completion Standard. **When the student completes this Stage, the student will be able to demonstrate the required cognitive, psycho-motor, and affective proficiency listed in Module 12 of the Intermediate Flight I book.**

Time required for completion (all modules to date inclusive)	DUAL Training								SOLO Practice						Other	Total Airplane	PC- Trainer	Flight Training Device	Brief Time
	S.E. Non- Comple x	S.E. Complex	Multi- Engin e	X-C Day	X-C Night	Local Day	Local Night	Inst. Ref.	S.E. Non- Comple x	S.E. Complex	X-C Day	X-C Night	Local Day	Local Night					
Module 12	26.0			14.0	6.0	4.0	2.0	23.4	21.5		11.0	3.0	5.0	2.5	3.0	47.5	4.0	10.0	20.0
Maximum provided by flight fees	34.7								23.0						N/A	57.7	N/A	13.0	90

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. Students whom complete the course in less than maximum provided are eligible to use that flight time up until the end of the semester

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 selected elements of the Instrument 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
Attendance	10%
Individual flight lesson performance	20%
Intermediate Module Exams	40%
Final Check Flight	30%

Grading Scale

A	90% - 100%
B+	85% - 89%
B	80% - 84%
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	60
3	0
4	AF grade issued in the course

Attendance Policy: 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 may 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.

Academic Contract: At the discretion of the instructor students not making normal progress in the flight course may be placed on academic contract. This contract forms an amendment to this course syllabus. Reasons that a student may be placed on academic contract may include prolonged weather delays, failure to complete course within the semester, and quality control / stage check results. Under academic contract students may be required to attend tutoring workshops and conduct remedial training

Examination Schedule

Following completion of each module students will be assessed by use of a written examination on the following dates:

Semester begins	Published on attendance record
Module 9 Exam	Published on attendance record
Module 10 Exam	Published on attendance record
Module 11 Exam	Published on attendance record
Module 12 Exam	Published on attendance record
Final Check Flight	Two weeks prior to finals Exact time will be dependant on scheduling and weather conditions

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 Instrument Pilot certification.**

Completion Standards. **To successfully meet the knowledge and flight requirements for the Instrument Pilot certificate as prescribed in the Training Course Outline (TCO) for Intermediate Flight I 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 towards attaining a FAA Instrument 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.

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.faa.gov

www.nts.gov