

AT115 : Commercial Flight Training

General Information

Author:	<ul style="list-style-type: none">Curtis G Potter
Course Code (CB01) :	AT115
Course Title (CB02) :	Commercial Flight Training
Department:	AT
Proposal Start:	Spring 2025
TOP Code (CB03) :	(3020.20) Piloting
CIP Code:	(49.0102) Airline/Commercial/Professional Pilot and Flight Crew.
SAM Code (CB09) :	Advanced Occupational
Distance Education Approved:	No
Will this course be taught asynchronously?:	No
Course Control Number (CB00) :	CCC000175688
Curriculum Committee Approval Date:	05/22/2024
Board of Trustees Approval Date:	07/16/2024
Last Cyclical Review Date:	05/22/2024
Course Description and Course Note:	AT 115 is a flight training lab course preparing the student for the Federal Aviation Administration Commercial Pilot Practical Examination. Topics addressed include: operation of complex and high-performance aircraft including the use of constant-speed propellers and retractable landing gear, maximum performance takeoffs and landings, steep turns, chandelles, lazy eights, and eights on pylons. Students will log fifteen hours of complex aircraft time.
Justification:	Mandatory Revision
Academic Career:	<ul style="list-style-type: none">Credit
Mode of Delivery:	
Author:	Curtis G Potter
Course Family:	

Academic Senate Discipline

Primary Discipline:	<ul style="list-style-type: none">Aviation (Flight, navigation, ground school, air traffic control)
Alternate Discipline:	No value
Alternate Discipline:	No value

Course Development

Basic Skill Status (CB08)

Course is not a basic skills course.

Allow Students to Gain Credit by Exam/Challenge

Course Special Class Status (CB13)

Course is not a special class.

Pre-Collegiate Level (CB21)

Not applicable.

Grading Basis

- Grade with Pass / No-Pass Option

Course Support Course Status (CB26)

Course is not a support course

General Education and C-ID

General Education Status (CB25)

Not Applicable

Transferability

Transferable to CSU only

Transferability Status

Approved

Units and Hours

Summary

Minimum Credit Units (CB07)	4
Maximum Credit Units (CB06)	4
Total Course In-Class (Contact) Hours	144
Total Course Out-of-Class Hours	72
Total Student Learning Hours	216

Credit / Non-Credit Options

Course Type (CB04)

Credit - Degree Applicable

Noncredit Course Category (CB22)

Credit Course.

Noncredit Special Characteristics

No Value

Course Classification Code (CB11)

Credit Course.

Variable Credit Course

Funding Agency Category (CB23)

Not Applicable.

Cooperative Work Experience

Education Status (CB10)

Weekly Student Hours

	In Class	Out of Class
Lecture Hours	2	4
Laboratory Hours	6	0
Studio Hours	0	0

Course Student Hours

Course Duration (Weeks)	18
Hours per unit divisor	0
Course In-Class (Contact) Hours	
Lecture	36
Laboratory	108
Studio	0

Total 144

Course Out-of-Class Hours

Lecture	72
Laboratory	0
Studio	0
Total	72

Time Commitment Notes for Students

No value

Units and Hours - Weekly Specialty Hours

Activity Name	Type	In Class	Out of Class
No Value	No Value	No Value	No Value

Pre-requisites, Co-requisites, Anti-requisites and Advisories

Prerequisite

AT114 - Instrument Flight Lab (in-development)

Objectives

- Pilot a single engine land airplane solely by instrument reference.
- Maintain slow flight and recover from stalls solely by instrument reference.
- Conduct precision and non-precision instrument approaches.
- Recover from unusual attitudes by reference to instruments.
- Enter and maintain holds and Distance Measuring Equipment (DME) arcs.
- Recognize and adapt to instrument failures.
- Plan and execute Instrument Flight Rules (IFR) cross-country flights.
- Comply with the Air Traffic Control system.
- Interpret published material necessary for instrument flight.
- Solve problematic in-flight navigation situations.

OR

Prerequisite

Possession of FAA Private Pilot License (airplane, single-engine land) with instrument rating, minimum of 200 hours of total flight time, and proof of satisfactory completion of the FAA Commercial Pilot Knowledge Examination.

Entry Standards

Entry Standards

Summarize the development of the concepts of instrument flight from visual flight.

Outline advanced radio navigation concepts.

Course Limitations

Cross Listed or Equivalent Course

Specifications

Methods of Instruction

Methods of Instruction	Lecture
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Methods of Instruction	Laboratory
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Methods of Instruction	Demonstrations
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Out of Class Assignments

- Review all FAA certification standards for commercial pilots
- Successful completion of FAA commercial pilot airplane knowledge examination
- Review and prepare for FAA oral exam
- Review and prepare for commercial flight maneuvers

Methods of Evaluation

Rationale

Evaluation	Daily verbal evaluation by flight instructor
Activity (answering journal prompt, group activity)	Phase checks conducted by Chief Pilot
Activity (answering journal prompt, group activity)	Mock oral and practical tests

Textbook Rationale

No Value

Textbooks

Author	Title	Publisher	Date	ISBN
No Value	No Value	No Value	No Value	No Value

Other Instructional Materials (i.e. OER, handouts)

No Value

Materials Fee

A material/lab fee may be required for this course.

Learning Outcomes and Objectives

Course Objectives

Operate constant speed propeller systems.

Operate retractable landing gear systems.

Perform maximum performance takeoffs and landings in complex aircraft.

Perform steep turns in complex aircraft.

Perform chandelles.

Perform lazy eights.

Perform eights on pylons.

SLOs

Operate a complex single engine airplane with constant speed propeller system.

Expected Outcome Performance: 70.0

ILOs
Core ILOs

Analyze and solve problems using critical, logical, and creative thinking; ask questions, pursue a line of inquiry, and derive conclusions; cultivate creativity that leads to innovative ideas.

Demonstrate depth of knowledge in a course, discipline, or vocation by applying practical knowledge, skills, abilities, theories, or methodologies to solve unique problems.

AT
Pilot Training -
Certificate

demonstrate practical skills required to pass FAA practical testing for the rating sought.

AT
Pilot Training - A.S.
Degree Major

demonstrate practical skills required to pass FAA practical testing for the rating sought.

Calculate weight and balance limitations and explain the results of exceeding aircraft limitations.

Expected Outcome Performance: 70.0

ILOs Analyze and solve problems using critical, logical, and creative thinking; ask questions, pursue a line of inquiry, and derive conclusions;
Core cultivate creativity that leads to innovative ideas.
ILOs

Demonstrate depth of knowledge in a course, discipline, or vocation by applying practical knowledge, skills, abilities, theories, or methodologies to solve unique problems.

Use quantitative and/or analytical mathematical skills to solve problems and to interpret, evaluate, and process information and data to draw logical conclusions and support claims.

Explain the differences between a private pilot license and a commercial pilot license.

Expected Outcome Performance: 70.0

ILOs Demonstrate depth of knowledge in a course, discipline, or vocation by applying practical knowledge, skills, abilities, theories, or
Core methodologies to solve unique problems.
ILOs

Course Content

Lecture Content

Complex Aircraft Systems (2 hours)

- Constant speed propellers
- Retractable landing gear

Review of Four Fundamentals (2 hours)

- Climbs
- Descents
- Straight and level
- Turns

Steep Turns (2 hours)

Chandelles (2 hours)

Lazy Eights (2 hours)

Eights on Pylons (2 hours)

Short Field Takeoffs and Landings (2 hours)

Soft Field Takeoffs and landings (2 hours)

Federal Aviation Administration Oral Examination Preparation (5 hours)

- Airspace system
- Airplane weight and balance
- Airplane performance
- Complex airplane systems
- Constant-speed propellers
- Retractable landing gear
- Flight planning

Cross-country and Emergency Procedures (4 hours)

Individualized Practice as Needed (4 hours)

Aeronautical Decision Making (3 hours)

- Pre-flight risk assessment
- In-flight risk assessment

- Fitness for flight
- Human factors
- Use of checklists

Simulated FAA Oral and Practical Test (4 hours)

Total hours: 36

Laboratory/Studio Content

Complex Aircraft Systems (6 hours)

- Constant speed propellers
- Retractable landing gear

Review of Four Fundamentals (6 hours)

- Climbs
- Descents
- Straight and level
- Turns

Steep Turns (6 hours)

Chandelles (6 hours)

Lazy Eights (6 hours)

Eights on Pylons (6 hours)

Short Field Takeoffs and Landings (6 hours)

Soft Field Takeoffs and Landings (6 hours)

Federal Aviation Administration Oral Examination Preparation (15 hours)

- Airspace system
- Airplane weight and balance
- Airplane performance
- Complex airplane systems
- Constant-speed propellers
- Retractable landing gear
- Flight planning

Cross-country and Emergency Procedures (12 hours)

Individualized Practice as Needed (12 hours)

Aeronautical Decision Making (9 hours)

- Pre-flight risk assessment
- In-flight risk assessment
- Fitness for flight
- Human factors
- Use of checklists

Simulated FAA Oral and Practical Test (12 hours)

Total hours: 108

Additional Information

Is this course proposed for GCC Major or General Education Graduation requirement? If yes, indicate which requirement in the two areas provided below.

No

GCC Major Requirements

No Value

GCC General Education Graduation Requirements

No Value

Repeatability

Not Repeatable

Justification (if repeatable was chosen above)

No Value

Resources

Did you contact your departmental library liaison?

Yes

If yes, who is your departmental library liaison?

Adina Lerner (Technology & Aviation, Visual & Performing Arts)

Did you contact the DEIA liaison?

Yes

Were there any DEIA changes made to this outline?

No

If yes, in what areas were these changes made:

No Value

Will any additional resources be needed for this course? (Click all that apply)

- No

If additional resources are needed, add a brief description and cost in the box provided.

No Value