Glendale College

# Course Outline of Record Report

Course ID 001339

Cyclical Review - October 2024

# AT125 : Instrument Rating Ground School

## General Information

| | |
|---|---|
| **Author:** | • Curtis G Potter<br>• Newman, Harry Robert<br>• Nezami, Manijeh<br>• Herwerth, Christopher |
| **Course Code (CB01) :** | AT125 |
| **Course Title (CB02) :** | Instrument Rating Ground School |
| **Department:** | AT |
| **Proposal Start:** | Fall 2026 |
| **TOP Code (CB03) :** | (3020.20) Piloting |
| **CIP Code:** | (49.0102) Airline/Commercial/Professional Pilot and Flight Crew. |
| **SAM Code (CB09) :** | B - Advanced Occupational |
| **Distance Education Approved:** | Yes |
| **Will this course be taught asynchronously?:** | Yes |
| **Course Control Number (CB00) :** | CCC000258124 |
| **Curriculum Committee Approval Date:** | 10/09/2024 |
| **Board of Trustees Approval Date:** | 11/11/2025 |
| **Last Cyclical Review Date:** | 10/09/2024 |
| **Course Description and Course Note:** | AT 125 introduces the student to the use of radio navigation, weather briefing, advanced navigation, standard instrument approaches, procedures and Federal Aviation Regulations pertaining to instrument flight. Students are prepared for the Federal Aviation Administration Instrument Pilot Written Examination. |
| **Justification:** | Mandatory Revision |
| **Academic Career:** | • Credit |
| **Mode of Delivery:** | • In-Person<br>• Remote<br>• Online |
| **Author:** | • Newman, Harry Robert<br>• Nezami, Manijeh<br>• Herwerth, Christopher |
| **Course Family:** | No value |

## Academic Senate Discipline

| | |
|---|---|
| **Primary Discipline:** | • 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)** | 3 |
| **Maximum Credit Units (CB06)** | 3 |
| **Total Course In-Class (Contact) Hours** | 54 |
| **Total Course Out-of-Class Hours** | 108 |
| **Total Student Learning Hours** | 162 |

### 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 | 3 | 6 |

### Course Student Hours

| | |
|---|---|
| **Course Duration (Weeks)** | 18 |
| **Hours per unit divisor** | 0 |

| | | |
|---|---|---|
| Laboratory Hours | 0 | 0 |
| Studio Hours | 0 | 0 |

| **Course In-Class (Contact) Hours** | |
|---|---|
| Lecture | 54 |
| Laboratory | 0 |
| Studio | 0 |
| **Total** | 54 |

| **Course Out-of-Class Hours** | |
|---|---|
| Lecture | 108 |
| Laboratory | 0 |
| Studio | 0 |
| **Total** | 108 |

## 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 |

## Prerequisites, Corequisites, Recommended Corequisites, and Recommended Preparation

### Advisory

AT120 - Private Pilot Ground School

**Objectives**

- Apply Federal Aviation Regulations to flight.
- Demonstrate knowledge of weather theory.
- Evaluate aviation weather information.
- Develop the skills of navigation, including radio, pilotage, and dead-reckoning.

**OR**

### Advisory

Possession of a private pilot’s certificate

## Entry Standards

| Entry Standards | Description |
| --- | --- |
| **Express an understanding of aerodynamics and the science of flight.** | No Value |
| **Demonstrating basic engine operating principles.** | No Value |

## Course Limitations

| Cross Listed or Equivalent Course | Description |
| --- | --- |
| No value | No value |

## Specifications

### Methods of Instruction

| Methods of Instruction | Lecture |
| --- | --- |
| **Methods of Instruction** | Discussion |
| **Methods of Instruction** | Multimedia |
| **Methods of Instruction** | Tutorial |
| **Methods of Instruction** | Demonstrations |
| **Methods of Instruction** | Field Activities (Trips) |

| | |
|---|---|
| **Methods of Instruction** | Guest Speakers |
| **Methods of Instruction** | Presentations |

**Out of Class Assignments**

- Chart study (e.g., Instrument Flight Rules (IFR) Departure, Enroute, Arrival, and Approach charts)
- Worksheets regarding FAA regulations, Instrument Flight Rules (IFR) flight planning, aircraft performance, and related subjects

| Methods of Evaluation | Description of Activity/Interaction |
|---|---|
| Exam/Quiz/Test | Written section exams |
| Exam/Quiz/Test | Final exam |

**Textbook Rationale**

No Value

**Textbooks**

| Author | Title | Publisher | Date | ISBN |
|---|---|---|---|---|
| Jeppesen | Guided Flight Discovery: Instrument/Commercial Textbook | Jeppesen | 2021 | 978-0884872788 |
| Jeppesen | Instrument Rating Airman Knowledge Test Guide | Jeppesen | 2021 | 978-0884876816 |

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

No Value

## Learning Outcomes

**Course Objectives**

Explain the proper procedures in the event of lost communication.

Recite the steps required to file an instrument flight plan.

Compare and contrast ground-based and satellite-based navigation systems.

Interpret published material necessary for instrument flight.

Solve problematic in-flight navigation situations.

**SLOs**

**Summarize the development of the concepts of instrument flight from visual flight.** Expected Outcome Performance: 70.0

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

**Outline advanced radio navigation concepts.** Expected Outcome Performance: 70.0

| | |
|---|---|
| *ILOs* Core ILOs | 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 - A.S. Degree Major | demonstrate an understanding of Federal Aviation Regulations. |
| | demonstrate the skills required to successfully pass the FAA knowledge exam appropriate to the rating sought. |
| *AT* Pilot Training - Certificate | demonstrate an understanding of Federal Aviation Regulations. |
| | demonstrate the skills required to successfully pass the FAA knowledge exam appropriate to the rating sought. |

**Demonstrate an understanding of the Air Traffic Control system.** Expected Outcome Performance: 70.0

| | |
|---|---|
| *ILOs* Core ILOs | 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 - A.S. Degree Major | demonstrate an understanding of Federal Aviation Regulations. |
| | demonstrate the skills required to successfully pass the FAA knowledge exam appropriate to the rating sought. |
| *AT* Pilot Training - Certificate | demonstrate an understanding of Federal Aviation Regulations. |
| | demonstrate the skills required to successfully pass the FAA knowledge exam appropriate to the rating sought. |
| *AT* Aviation Administration - Certificate | demonstrate an understanding of the differences and similarities between general aviation and commercial aviation. |
| | demonstrate the skills required to establish and manage airport operations. |
| *AT* Aviation Administration - A.S. Degree Major | demonstrate an understanding of the differences and similarities between general aviation and commercial aviation. |
| | demonstrate the skills required to establish and manage airport operations. |

## Additional SLO Information

**Does this proposal include revisions that might improve student attainment of course learning outcomes?**

No

**Is this proposal submitted in response to learning outcomes assessment data?**

No

**If yes was selected in either of the above questions for learning outcomes, explain and attach evidence of discussions about learning outcomes.**

No Value

**SLO Evidence**

No Value

## Course Content

Lecture Content

**The basic flight instruments (3 hours)**
- The pilot-static instrument
- The gyro instruments

**Use of and the relationship between the instruments (4 hours)**
- Straight flight
- Climbing and descending
- Turns
- Transition from one phase to another

**Attitude instrument flight (4 hours)**
- Instrument cross check
- Instrument interpretation
- Aircraft control
- Primary and supporting instruments

**Air navigation radio aids (8 hours)**
- The air traffic control system
- Non-directional beacons
- Airport Surveillance Radar (ASR) and Precision Approach Radar (PAR)
- Radar beacons
- Very High Frequency (VHF) marker beacons
- Very High Frequency Omnidirectional Range (VOR)
- Distance Measurement Equipment (DME)
- Area Navigation (RNAV)

**Instrument landing system (4 hours)**
- Ground installation and characteristics
- Airborne equipment
- Flight procedures

**Instrument charts (8 hours)**
- Enroute and area
- Approach and landing
- Standard instrument departures
- Standard instrument arrivals

**Air traffic control procedures (8 hours)**
- At airports

- Departures
- Enroute and holding
- Approach
- Communications

**Federal aviation regulations (8 hours)**

- Pilot certification
- General operating rules
- Air traffic rules

**Obtaining and evaluating weather reports (4 hours)**

**Aviation Decision Making (3 hours)**

- Risk Management
- Human Factors in Aviation

**Total hours: 54**

## Additional Information

**Repeatability**

Not Repeatable

**Justification (if repeatable was chosen above)**

No Value

**Is it possible this course will have a material fee?**

No Value

**I have contacted my library liaison (https://campusguides.glendale.edu/faculty/liaisons):**

No

**What term(s) will this course be offered?**

Spring

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

No Value

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

No Value

## Resources

**Did you contact your departmental library liaison?**

Yes

**If yes, who is your departmental library liason?**

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