OFFICE OF ACADEMIC ASSESSMENT
The UNIVERSITY of OKLAHOMA

Program Assessment Report

2023 - 2024

CAGS - Aviation Management Pilot (BS)

Program General Information

General Information

Mission

Aviation Management (Fly) and Professional Pilot are both indicated here, because they are very similar.

The mission of the professional pilot degree ensures graduates are immersed in the historical, current and emerging educational issues found within the various types of flight missions within aviation and ensures graduates are prepared for a productive professional flying career. The curriculum will afford the opportunity to prepare individual students to not only possess the skill sets of a competent professional pilot but also with the skills to assume leadership roles within the aviation industry with a solid foundation of appropriate level aeronautics, pilot skills within single engine land and multi-engine land operations, personnel behavior and human relations within aviation and a foundation of business management. Through the curriculum and attendance at the University of Oklahoma the student will have the opportunity to study in a multi-cultural environment and obtain the knowledge which will allow the student to examine, evaluate and appreciate the economic, political, cultural, social, moral, and technological aspects of aviation. The curriculum provides for skills in mathematics, sciences, communications, meteorology and aeronautics including certification as a commercial pilot with airplane single-engine land, multi-engine land and instrument airplane ratings with high performance and high altitude endorsements. Critical thinking and problem solving skills in aircraft performance, navigation and aircraft systems operations are taught and developed via classroom training and simulations in advanced aircrew training devices. Effective single pilot / crew resource management, human factors, operational risk management and safety awareness are introduced and constantly emphasized throughout the curriculum. Graduates will be able to contribute positively to their organizations of employment and society through the varied roles and missions of being a professional pilot.

The mission of the aviation management (flying) degree ensures students are immersed in the historical, current and emerging educational and real world issues found within the various types of support and business management missions within the aviation industry. The curriculum will afford the opportunity to prepare individual students to not only possess the skill sets of a competent aviation management professional but also with the skills to assume leadership and team roles within the aviation industry with a solid foundation of management, finance and business with the background of commercial aviation. Students will be encouraged to foster the discovery and transmission of knowledge about the development, functioning, management, organizational behavior and continuing adaptation of organizations in a changing global business environment. Through the curriculum and attendance at the University of Oklahoma the student will have the opportunity to grow and develop in a mature environment and obtain skill sets which will allow the student to examine, evaluate and appreciate the economic, political, cultural, moral, and technological aspects of today's aviation industry. Additionally, The curriculum provides for skills in mathematics, sciences (or physics), communications, meteorology and aeronautics including certification as a commercial pilot with airplane single-engine land and instrument airplane ratings. Critical thinking and problem solving skills in aircraft performance, navigation and aircraft systems operations are developed via simulations in advanced aircrew training devices. Effective pilot resource management, human factors, single and crew resource management, operational risk management and safety awareness are constantly emphasized throughout the curriculum. Graduates will contribute positively to their organizations of employment and society through the varied roles and missions of being an aviation management professional.

College

Atmospheric & Geographic Sciences

Department/School/Division

Aviation

Assessment Liaison

Brenda Salgado

PP/AM Outcome 1

Student Learning Outcome (SLO)
Apply mathematics, science, and applied sciences to aviation-related disciplines
Ability to perform simple math problems; Ability to understand the nature of gases; Ability to understand meteorological conditions; Standard of Excellence Score >85%

Outcome Status
Active

Direct - Examination

Assessment Method Description
AVIA 1111 Av Orientation: Oral examinations by the instructor in class (questions from the podium) and Written Tests measuring understanding of applied science of aviation

Performance Target
>80%

Direct - Examination

Assessment Method Description
AVIA 2613 Av Safety: Online testing no less than mid-term and final (take home variety, untimed) measuring understanding of scientific analysis of accident data

Performance Target
>80%

Direct - Publication

Assessment Method Description
AVIA 3103 students write 15 papers on the variations of the applied science of human factors (physiological and psychological)

Performance Target
>85%

Direct - Examination

Assessment Method Description
AVIA 3333 tests on the philosophy of western law and its application to case law

Performance Target
>85%

Indirect - Student Course Evaluation

Assessment Method Description
eValuate scores

Performance Target
>4

Direct - Examination

Assessment Method Description
In Intro to Aviation (1113) tests, quizzes, and oral and written assignments are used to determine the students ability to apply math and science to aviation-related disciplines.

Performance Target
FAA expects >70%; Department expects >80%

Direct - Examination

Assessment Method Description

In Primary flying (1222) tests, quizzes, and oral and written assignments are used to measure the students' abilities to apply math and science to aviation-related disciplines.

Performance Target
FAA expects >70%; Department expects >80%

Direct - Examination

Assessment Method Description
In Advance flying (2231) oral and written assignments, and practical assessments are used to determine if students can apply math and science to aviation-related disciplines.

Performance Target
FAA expects >70%; Department expects >80%

Direct - Examination

Assessment Method Description
AVIA 1013, Intro to ATC. Computational testing of math and science facts and formulas

Performance Target
85%

PP/AM Outcome 2

Student Learning Outcome (SLO)
Analyze and interpret data: Ability to read and understand performance data; Ability to apply formulae to varying conditions; Ability to interpret complex situations and identify right behavior; Standard of Excellence Score >100%, but greater than 70% is minimally acceptable by FAA standards.

Outcome Status
Active

Direct - Examination

Assessment Method Description
Part 141 Pilot Training is regulated by the Federal Aviation Administration. The program must maintain a greater than 80% first-time pass rate for both written and practical tests. In Intro to Aviation (AVIA 1113), Primary Flight (AVIA 1222), Advanced Flight (AVIA 2231) and Secondary Flight (AVIA 2341) computer-generated tests measure ability to interpret weather data, takeoff data, landing data, and navigational data. Students interpret complex weather data from daily forecasts of terminal weather conditions, based

Performance Target
FAA expects >70%; Department expects >80%

Indirect - Student Course Evaluation

Assessment Method Description
eValuate

Performance Target
>4

PP/AM Outcome 3

Student Learning Outcome (SLO)
Work effectively in teams
Ability to read and understand performance data; Ability to apply formulae to varying conditions; Ability to interpret complex situations and identify right behavior; Standard of Excellence Score >85%

Outcome Status
Active

Direct - Examination

Assessment Method Description
In Intro to Aviation (AVIA 1113), Primary Flight (AVIA 1222), Advanced Flight (AVIA 2231) and Secondary Flight (AVIA 2341) computer-generated tests measure ability to interpret takeoff data, landing data, and navigational data. Students compute takeoff speeds, landing speeds, headwind and crosswind components for landing. Students review operational restrictions to flight, to include maximum and minimum flying speeds.

Performance Target
FAA expects >70%; Department expects >80%

Direct - Examination

Assessment Method Description
In Aviation Safety (AVIA 2613) online tests examine students' ability to identify right behavior and wrong behavior from National Transportation Safety Board accident reports.

Performance Target
>80%

Direct - Examination

Assessment Method Description
In Crew Resource Management (AVIA 4423) on multiple choice tests students identify the five hazardous attitudes for pilots, behavioral markers for all phases of flight, and right and wrong behavior from accidents reported in Limits of Expertise. Teams report on accident findings for aircraft accidents in Limits of Expertise.

Performance Target
>85%

Indirect - Student Course Evaluation

Assessment Method Description
eValuate

Performance Target
>4

Direct - Project

Assessment Method Description
In Capstone (4713) students work on teams to complete problem-solving projects. Projects are graded by the instructor and by clients and mentors.

Performance Target
>85%

Direct - Examination

Assessment Method Description
In 4423, CRM knowledge is tested by fill in the blank.

Performance Target
>85%

Indirect - Student Survey

Assessment Method Description
Student Experience Surveys are reviewed. Because the format is different from eValuate, we are looking at majority scores for each category in the student survey.

Performance Target
Exceeds expectations (percentage greater than 60%)

PP/AM Outcome 5

Student Learning Outcome (SLO)

Communicate effectively, using both written and oral communication skills
Ability to communicate effectively, by use of common radio phraseology; Ability to explain aerial maneuvers; Understand the benefits of effective communication among pilots and air traffic controllers; Ability to use the case brief format to explain complex law cases; Standard of Excellence Score >85%

Outcome Status
Active

Direct - Examination

Assessment Method Description
In Intro to Aviation (AVIA 1113), Primary Flight (AVIA 1222), Advanced Flight (AVIA 2231) and Secondary Flight (AVIA 2341) communication effectiveness in radio phraseology is measured by in class recitation and during flight labs. Direct measure is based on pattern matching.

Performance Target
FAA expects >70%; Department expects >80%

Direct - Examination

Assessment Method Description
In Aviation Safety (AVIA 2613) online tests examine students' ability to identify proper radio phraseology from National Transportation Safety Board accident reports.

Performance Target
>80%

Direct - Project

Assessment Method Description
In Crew Resource Management (AVIA 4423) Teams report on accident findings for aircraft accidents in Limits of Expertise measure communication effectiveness.

Performance Target
>85%

Indirect - Student Course Evaluation

Assessment Method Description
Student Experience Survey

Performance Target
>4

Direct - Project

Assessment Method Description
Formal evaluation of the final project presentation for AVIA 4713, Capstone.

Performance Target
88% (presentation); 88% (group assignment)

Indirect - Student Course Evaluation

Assessment Method Description
eValuate end of course survey for 4983, Airline Management

Performance Target
4.0

Indirect - Student Course Evaluation

Assessment Method Description
eValuate end of course survey for 4713, Capstone

Performance Target
4.0

PP/AM Outcome 6

Student Learning Outcome (SLO)
Engage in and recognize the need for life-long learning
Ability to see the benefit of building experience as a pilot; Ability to use historical examples to support right thinking in the cockpit; Ability to understand the benefit of sustained, right behavior; Ability to understand how Capstone opportunities build a person's confidence in solving operational problems. Excellence Score >85%

Outcome Status
Active

Direct - Examination

Assessment Method Description
In Aviation Orientation (AVIA 1111) paper assignment measures understanding of right thinking and right behavior; test measures knowledge of historical example that support right thinking
In flight courses (AVIA 1113, 1222, 2231, 2341, 3572, 3581) stage checks measure right thinking, right behavior, pilot experience, pilot judgment, ability to solve problems

Performance Target
FAA expects >70%; Department expects >80%

Direct - Examination

Assessment Method Description
History of Aviation (AVIA 2513) test measures retention of historical examples of right thinking and right behavior

Performance Target
>85%

Direct - Publication

Assessment Method Description
Flight Deck Env. Issues (AVIA 3103) papers 1-15 (e.g. gas laws, anatomy, psychology of flight, etc.) measure awareness of human factors issues that affect flight safety and personal readiness to fly

Performance Target
>85%

Direct - Examination

Assessment Method Description
Aviation Safety (AVIA 2613) online tests measure understanding of right behavior and right thinking through examination of NTSB accident reports

Performance Target
>80%

Direct - Presentation

Assessment Method Description
Survey of Aviation Law (AVIA 3333) case briefs examine student awareness of historical legal issues and how they were resolved in the courts; test 1 examines student knowledge of origins of western law; review of Department of Transportation Office of Inspector General criminal cases dealing with aviation safety measures awareness of current crimes

Performance Target
>85%

Direct - Examination

Assessment Method Description

Crew Resource Management (AVIA 4423) test 1 measures student awareness of development of resource management in pilots from WWII to present; review of NTSB accident reports in Limits of Expertise team assignment measures knowledge of ineffective resource management in past

Performance Target
>85%

Direct - Publication

Assessment Method Description
Aerospace Ethics (AVIA 4663) papers 1-4 measure student awareness of historical ethical breaches in the aerospace industry, to include outsourcing, consequentialism in decision making, and whistle blowing

Performance Target
>85%

Direct - Project

Assessment Method Description
Senior Capstone (AVIA 4713) team assignments measure students' ability to manage a project and solve real life problems

Performance Target
>80%

Indirect - Student Course Evaluation

Assessment Method Description
eValuate

Performance Target
>4

Direct - Project

Assessment Method Description
In AVIA 4990, scientific investigation

Performance Target
85%

Indirect - Interview

Assessment Method Description
Students write an 1800-word review of books they read for each course. During Capstone, students are interviewed and held accountable for the content of books they have read since beginning their education in the School of Aviation Studies. The interview is conducted by a panel of faculty and industry partners. Students answer questions about at least four books they have read.

Performance Target
Pass

Indirect - Student Course Evaluation

Assessment Method Description
eValuate end of course survey for 3103, Flight Deck Environmental Issues

Performance Target
4.0

Indirect - Student Course Evaluation

Assessment Method Description
eValuate comments on the end of course survey

Performance Target
favorable comments for Reading for Life project

Direct - Performance

Assessment Method Description
Measure progression through flight courses. A failure to complete on time could mean the end of flying at OU.

Performance Target
100% completion rate for AVIA 1222 Primary Flying.

Indirect - Interview

Assessment Method Description
AVIA 4663 Ethics, Real world case studies are used to generate explanations and analysis

Performance Target
85%

PP/AM Outcome 7

Student Learning Outcome (SLO)
Assess contemporary issues
Ability to understand how past experiences can help prevent wrong actions; Ability to interpret from NTSB narrative what the key issues were in any aircraft accident report; Ability to understand the benefit of reading Aviation Safety Reporting Systems data sets; Standard of Excellence Score >85%

Outcome Status
Active

Direct - Examination

Assessment Method Description
In Aviation Orientation (AVIA 1111) current event quizzes are used to measure comprehension of aviation contemporary issues

Performance Target
>80%

Direct - Publication

Assessment Method Description
In Flight Deck Env. Issues (AVIA 3103) a reflection paper is used to measure comprehension of human factors contemporary issues

Performance Target
>85%

Direct - Examination

Assessment Method Description
In History of Aviation (AVIA 2513) current event quizzes and reflection papers are used to measure comprehension of historic events of the last few years

Performance Target
>85%

Direct - Examination

Assessment Method Description
In Aviation Safety (AVIA 2613) analysis of recent NTSB aircraft accident reports measures understanding of contemporary safety issues as regards right and wrong actions of pilots

Performance Target
>80%

Direct - Performance

Assessment Method Description
In Career Development (AVIA 3013) students participate in mock job interviews conducted by commercial airline pilots to measure awareness of relevant, contemporary issues in job placement

Performance Target
>80%

Direct - Publication

Assessment Method Description
In Survey of Aviation Law (AVIA 3333) a paper reviewing criminal activity affecting aviation safety from the Office of Inspector General for the Department of Transportation measures awareness of contemporary issues affecting flight safety

Performance Target
>85%

Direct - Examination

Assessment Method Description
In Aerospace Contract Administration (AVIA 3913) tests measure understanding of contemporary issues in aerospace project management

Performance Target
>80%

Direct - Project

Assessment Method Description
In Crew Resource Management (AVIA 4423) team project measures student ability to assess contemporary issues in flight deck resource management and in aircraft accident prevention

Performance Target
>85%

Direct - Project

Assessment Method Description
In Aerospace Ethics (AVIA 4663) four papers measure assessment of contemporary issues related to maintenance outsourcing, airport modernization at Chicago O'Hare, consequentialism in ethical decision making as regards Aviation Safety Inspectors assigned to Part 121 operations, and the ethics whistle blowing

Performance Target
>85%

Direct - Project

Assessment Method Description
In Senior Capstone (AVIA 4713) team projects measure students' ability to form a team, find a real problem needing to be solved that assesses contemporary issues in aviation, discuss goals and objectives with project clients, create a statement of work, distribute workload, and create deliverables that satisfy the project client

Performance Target
>80%

Indirect - Student Course Evaluation

Assessment Method Description
eValuate

Performance Target
>4

Direct - Examination

Assessment Method Description
In 4423, Crew Resource Management, a written test is used to assess knowledge about this topic.

Performance Target
85%

Direct - Examination

Assessment Method Description
AVIA 3103 Flight Deck Environmental Issues, Chapter Tests

Performance Target
90%

Direct - Project

Assessment Method Description
AVIA 3913, Project Development and Reporting

Performance Target
85%

PP/AM Outcome 8

Student Learning Outcome (SLO)
Use the techniques, skills and modern technology necessary for professional practice
Ability to use electronic devices while controlling aircraft. Excellence Score >85%

Outcome Status
Active

Direct - Examination

Assessment Method Description
In Intro to Aviation (AVIA 1113) stage check measures student ability to use modern technology while controlling an aircraft
In Primary Flight (AVIA 1222) stage check measures student ability to use modern technology while controlling an aircraft
In Advanced Flight (AVIA 2231) stage check measures student ability to use modern technology while controlling an aircraft
In Secondary Flight (AVIA 2341) stage check measures student ability to use modern technology while controlling an aircraft
In Fundamentals of Instrument Flight (AVIA 3133) stage check measures student ability to use modern technology while controlling an aircraft
In Instrument Flying (AVIA 3572) stage check measures student ability to use modern technology while controlling an aircraft
In Turbine Transition (AVIA 4313) stage check measures student ability to use modern technology while controlling an aircraft

Performance Target
FAA expects >70%; Department expects >80%

Indirect - Student Course Evaluation

Assessment Method Description
eValuate

Performance Target
>4

Indirect - Student Survey

Assessment Method Description
Senior exit survey

Performance Target
>4

PP/AM Outcome 9

Student Learning Outcome (SLO)
Assess the national and international aviation environment
Ability to understand how the national airspace system works and how to operate within it
Excellence Score >85%

Outcome Status

Active

Direct - Examination

Assessment Method Description
In Intro to Aviation (AVIA 1113) stage check measures student ability to safely operate an aircraft in the national airspace system
In Primary Flight (AVIA 1222) stage check measures student ability to safely operate an aircraft in the national airspace system
In Advanced Flight (AVIA 2231) stage check measures student ability to safely operate an aircraft in the national airspace system
In Secondary Flight (AVIA 2341) stage check measures student ability to safely operate an aircraft in the national airspace system
In Fundamentals of Instrument Flight (AVIA 3133) stage check measures student ability to safely operate an aircraft in the national airspace system
In Instrument Flying (AVIA 3572) stage check measures student ability to safely operate an aircraft in the national airspace system
In Turbine Transition (AVIA 4313) stage check measures student ability to safely operate an aircraft in the national airspace system

Performance Target
FAA expects >70%; Department expects >80%

Indirect - Student Course Evaluation

Assessment Method Description
eValuate

Performance Target
>4

PP/AM Outcome 10

Student Learning Outcome (SLO)
Apply pertinent knowledge in identifying and solving problems
Ability to solve systems problems and derive a safe course of action when confronted with aircraft malfunctions; Ability to decide when an alternate is necessary and when it is best to proceed to that alternate; Ability to know when an approach is unstable and then to recover; Standard of Excellence Score >85%

Outcome Status
Active

Direct - Examination

Assessment Method Description
In Fundamentals of Instrument Flight (AVIA 3133) stage check measures student ability to make sound aeronautical decisions, based on proper risk assessment of a complex flight environment
In Instrument Flying (AVIA 3572) stage check measures student ability to make sound aeronautical decisions, based on proper risk assessment of a complex flight environment
In Turbine Transition (AVIA 4313) stage check measures student ability to make sound aeronautical decisions, based on proper risk assessment of a complex flight environment

Performance Target
FAA expects >70%; Department expects >80%

Direct - Presentation

Assessment Method Description

In Crew Resource Management (AVIA 4423) teams examine NTSB accident reports and other analysis by human factors experts to determine what behavioral markers were absent during the examined flight

Performance Target
>85%

Indirect - Student Course Evaluation

Assessment Method Description
eValuate

Performance Target
>4

Direct - Project

Assessment Method Description
In Capstone (4713) students select existing problems in aviation, develop a Statement of Work, and develop a plan to solve the problem

Performance Target
>80%

PP/AM Outcome 11

Student Learning Outcome (SLO)
Apply knowledge of business sustainability to aviation issues
Ability to operate in an IFR environment, while saving fuel and time
Excellence Score >85%

Outcome Status
Active

Direct - Examination

Assessment Method Description
In Fundamentals of Instrument Flight (AVIA 3133) stage check measures student ability to make sound aeronautical decisions while flying in the IFR environment
In Instrument Flying (AVIA 3572) stage check measures student ability to make sound aeronautical decisions while flying in the IFR environment
In Turbine Transition (AVIA 4313) stage check measures student ability to make sound aeronautical decisions while flying in the IFR environment

Performance Target
FAA expects >70%; Department expects >80%

Indirect - Student Course Evaluation

Assessment Method Description
eValuate

Performance Target
>4

Direct - Examination

Assessment Method Description
In Aerospace Contract Administration (3913) student comprehension of business sustainability issues is tested

Performance Target
>80%

Direct - Project

Assessment Method Description

In AVIA 4713, Executive board develops business opportunities, develops strategic plans for making money, runs the business

Performance Target
90%

Professionalism

Student Learning Outcome (SLO)
practices professional deportment

Outcome Status
Active

Indirect - Student Survey

Assessment Method Description
Students put a check in boxes beside numerous descriptors of professionalism. They do this at the end of each academic year.

Performance Target
A majority of the descriptors of professionalism have been selected.

Related Documents
Rubric - Professionalism (1).doc

Indirect - Interview

Assessment Method Description
Faculty members will review each student's professionalism record and will then schedule a personal interview.

Performance Target
Growth as an aviation/aerospace professional

Aviation Core Outcomes: Aviation Management Fly Track

Aviation Core
Attributes of an aviation professional, career planning and certification 1111, 1113, 1222, 2231, 2341, 3111, 3113, 3133, 3572, 3581, 4313, 4552, 4622
Aircraft design, performance, operating characteristics, and maintenance 1111, 1113, 1222, 2231, 2341, 3111, 3113, 3133, 3572, 3581, 4313, 4552, 4622
Aviation safety & Human factors 1111, 1113, 1222, 2231, 2341, 2613, 3111, 3113, 3133, 3572, 3581, 4313, 4552, 4622
National & International aviation law, regulations and labor issues 1111, 1113, 1222, 2231, 2341, 3111, 3113, 3133, 3572, 3581, 4313, 4552, 4622
Airports, airspace and ATC 1111, 1113, 1222, 2231, 2341, 3111, 3113, 3133, 3572, 3581, 4313, 4552, 4622
Meteorology & environmental issues 1111, 1113, 1222, 2231, 2341, 3111, 3113, 3133, 3572, 3581, 4313, 4552, 4622

Aviation Core items are measured via FAA-approved ground (classroom) and practical (flight) test standards. Outcomes are compared to Federal Aviation Regulation standards, as monitored by the Flight Standards District Office of the Federal Aviation Administration.