



**CATALOG
& STUDENT
HANDBOOK
ADDENDUM**

2021-2022





EDUCATIONAL PROGRAMS

Airway Science Technology - Flight Emphasis (Effective Spring 2022)

Associate in Applied Science: AAS 3707

64-82 Credits

Program Contact

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Program Description

The Associate in Applied Science (AAS) in Airway Science Technology, Flight Emphasis program is designed to prepare students to apply technical knowledge and skills to the flying of commercial, corporate, or private aircraft. Program content includes private, instrument, commercial single-engine, commercial multi-engine, and flight instructor certifications. The program develops students' willingness to learn, critical thinking, organizational skills, initiative, reliability, accountability, communication, and resource management skills. During the program, students will be provided the resources and training required for Federal Aviation Administration (FAA) written and practical examinations

Flight Policies

Flight and simulator training costs are the responsibility of the student. These include hourly costs for aircraft and flight instruction, tuition, fees, and other expenses. Once students have commenced flight training within the CGCC Airway Science, Flight Emphasis program, they will not receive college credit for flight instruction received at flight schools other than the school or schools with which Maricopa County Community College District has currently contracted for such instruction.

Students must meet FAA Aviation English Language Standards and complete Transportation Security Administration (TSA) Citizenship Verification (United States citizens) or Alien Flight School Program Application (non-United States citizens). By enrolling in this program, students agree to submit to random drug testing. Students must complete a security threat assessment for airport apron access.

Medical Certificates

A current medical certificate is required for all students planning to begin flight training. The physical examination must be performed by a medical doctor

who is a designated Aviation Medical Examiner. Students are advised to obtain their medical certificates well in advance of beginning the flight program. This will ensure that medical problems or physical limitations that may alter career plans can be addressed before entering flight courses.

There are three types of medical certificates - Class III, Class II, and Class I, but students are advised to obtain a Class I certificate if they are planning a career in professional flight.

Students using Veteran Affairs education benefits must have at least a Class II medical certificate, but Class I is recommended, before beginning 200-level flight courses. Flight labs must be taken concurrently with the appropriate ground courses. Attendance is mandatory in the aviation ground school courses in accordance with Federal Aviation Regulation (FAA) Part 141. Failure to meet these attendance requirements will disqualify the student for FAA pilot certification.

Aviation and related courses from other colleges and universities may transfer to CGCC. All aviation courses, flight or non-flight, are reviewed by the Aviation Program Coordinator for applicability.

Transfer of pilot ratings:

Students who have pilot certificates or ratings from a college level program may apply for prior learning assessment. Students should complete this process before enrolling in any 200-level ground or flight courses.

In all cases, it is the responsibility of the student to initiate the process.

After three failed attempts in any flight or ground course, excluding withdrawals, students must seek division approval for re-enrollment.

Program Notes

Students must earn a grade of C or better for all courses required within the program.

Admission Criteria

All students must currently possess a Valid FAA Medical Certificate

Program Prerequisites: 0-6 Credits

Students must consult with a Program Director, as the program prerequisites may be waived as requirements to the program for those students who have FAA Private Pilot Certificates and/or have course equivalents as indicated by assessment.

+ AET107 Private Pilot Ground School (5)

AND

+ AET110 Private Pilot Flight (1) OR

+ AET112 Private Pilot Flight Test Course (1)

OR

A division/program approved FAA Pilot Certificate (0) 0-6

Required Courses: 42-54 Credits

AET115 Aviation Meteorology 3

+ AET207 Attitude Instruments and Navigation 3

+ AET210 Commercial Flight Lab I 1

+ AET217 Instrument Procedures 3

+ AET220 Instrument Flight Lab 1

+ AET208 Aviation Safety 3

+ AET213 Aerodynamics and Performance 3

+ AET221 Commercial Flight Lab II 1

+ AET225 Advanced Aircraft Systems 4

+ AET203 Basic Airplane Systems 3

+ AET222 Commercial Flight Lab III 1

+ AET229 Crew Resource Management 3

+ AET239 Commercial Flight Lab IV 1

UAS107 Unmanned Aircraft Systems Operator Certification 3

+ AET237 Multiengine Airplane Pilot Ground School 2

+ AET240 Multiengine Airplane Pilot Flight Lab 1

+ AET227 Certified Flight Instructor: Airplane, Single Engine Land Ground School 5

+ AET230 Certified Flight Instructor: Airplane, Single Engine Land Flight Lab 1

Recommended for Transfer: University of North Dakota

PSY101 Introduction to Psychology (3)

SOC101 Introduction to Sociology (3)

POS140 Comparative Government (3)

COM263 Elements of Intercultural Communication (3) 0-12

General Education: 22-28 Credits**Core: 12-18 Credits****First-Year Composition**

+ENG101 First-Year Composition (3) OR

+ENG107 First-Year Composition for ESL (3) AND

+ENG102 First-Year Composition (3) OR

+ENG108 First-Year Composition for ESL (3) 6

Oral Communication

COM100 Introduction to Human Communication (3) OR

COM110 Interpersonal Communication (3) OR

+COM225 Public Speaking (3) OR

COM230 Small Group Communication (3) 3

Critical Reading

+CRE101 College Critical Reading and Critical Thinking (3)

OR Equivalent as indicated by assessment 0-3

Mathematics

+MAT120 Intermediate Algebra (5) OR

+MAT121 Intermediate Algebra (4) OR

+MAT122 Intermediate Algebra (3) OR

MAT126 Intermediate Algebra with Review (6) 3-6

Distribution: 10 credits**Humanities, Arts and Design**

Any approved general education course from the

Humanities, Arts and Design area. 3 Social and

Behavioral Sciences Any approved general education

course from the Social and Behavioral Sciences area. 3

Natural Sciences

+PHY101 Introduction to Physics

Program Notes

Students must earn a grade of "C" or better in all

courses within the program. Overall program minimum

GPA = 2.00.

+ indicates course has prerequisites and/or corequisites.

++ indicates any suffixed course may be selected.

Admission Criteria

Students wishing to enroll in this certificate program must complete an application process before being officially accepted into the program.

Program Prerequisites: None**Required Courses: 65-84 Credits**

- +AMT124 Aircraft Forms and Regulations, Weight and Balance, Drawings, and Ground Operations (5)
- +AMT126 Fundamentals of Mathematics and Electricity (9)
- +AMT128 Fundamentals of Aviation Physics, Corrosion Control, Materials and Processes,



COURSE DESCRIPTIONS

Course Description Additions

AET221 / 1 CREDIT / 5 PERIODS

Commercial Flight Lab II

Intermediate flight course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot practical examination. Emphasis on commercial and solo cross-country flight operations. Student must fly approximately 45 hours at their own expense. Maneuvers and procedures during dual instruction are designed to be performed with flight instructor guidance. Requires passing commercial pilot stage checks similar to the FAA check ride. Prerequisites: A grade of C or better in AET207 and AET210 or permission of Instructor. Corequisites: AET213.

AET222 / 1 CREDIT / 5 PERIODS

Commercial Flight Lab III

Advanced flight course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot practical examination. Emphasis on commercial operations. Student must fly approximately 45 hours at their own expense. Maneuvers and procedures are designed to be performed with little flight instructor guidance. Requires commercial pilot stage checks similar to the FAA check ride. Prerequisites: A grade of C or better in AET221 and AET213. Corequisites: AET203.

AET239 / 1 CREDIT / 5 PERIODS

Commercial Flight Lab IV

Final flight course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot practical examination. Emphasis on commercial operations. Student must fly approximately 20 hours at their own expense. Maneuvers and procedures are designed to be performed without flight instructor guidance. Requires passing commercial pilot stage check similar to the FAA check ride. Prerequisites: A grade of C or better in (AET203 and AET222), or permission of Instructor.



COLLEGE SERVICES & REGULATIONS

Approved VA Funding

Airway Science Technology, Flight Emphasis

Approved Funding for VA Flight Training for 2021-2022

Flight Standards District Office (FSDO)

Approved Minimum Times Per Part 141 Training Course Outlines

Costs are calculated according to the following hourly rates:

Hourly Rates and Instruction Rates				
Aircraft Rate	Solo Rate	Dual Rate	Aircraft Training Device (ATD)	Rate
Cessna 172/Piper Archer	\$147.00	\$216.00	Single Engine ATD (Dual Only)	\$159.00
Seminole	NA	\$356.00	Mentor ATD (Dual Only)	\$174.00

Instructor Rate: \$69.00

“Dual” includes Instructor cost.

Commercial Instrument Pilot Airplane Single and Multi-Engine Land (SMEL) Course (Part 141) – Students in Commercial/Instrument Training Prior to Fall 2021

This course is made up of three individual flight courses. The total flight time requirement is 155 hours of the combined courses. It is imperative that you meet each course requirement to satisfy the total time requirement.

Due to an FAA mandated change in curriculum, only students who initiated Commercial/Instrument flight training prior to Fall 2021 will be approved for the following funds. Students in this curriculum will be required to complete training by June 21, 2022 or be required to transfer to the new curriculum at additional costs.

AET210 - Instrument Commercial Flight I	59.5
AET220 - Instrument Commercial Flight II	70.5
AET240 - Multi-Engine Airplane Pilot Flight	25.0
	155.0

The above estimates represent minimum flight hours to meet Federal Aviation Administration requirements. Students may need additional flight hours to demonstrate competency.

The following rates and flight hours have been approved for VA funding at the UND Aerospace FTC located at Mesa, AZ. VA will only fund these minimum training requirements and students are required to cover additional costs. VA will only cover costs listed for each specific time requirement.

AET210 - Instrument Commercial Flight I (Lessons 1-36)		\$10,335.60
Dual Cessna 172/Piper Archer	25.5	\$5,508.00
Solo Cessna 172/Piper Archer	10	\$1,470.00
Dual ATD	14	\$2,226.00
Ground	6.5	\$448.50
Pre/Post	9.9	\$683.10

AET220 - Instrument Commercial Flight II (Lessons 37-68)		\$13,681.80
Dual Cessna 172/Piper Archer	43.7	\$9,439.20
Solo Cessna 172/Piper Archer	10	\$1,470.00
Dual ATD	5.2	\$826.80
Ground	16	\$1,104.00
Pre/Post	12.2	\$841.80

AET240 - Multi-Engine Systems & Procedures (Lessons 69-94)		\$7,925.25
Dual Seminole	15	\$5,340.00
Dual ATD	10	\$1,740.00
Ground	6	\$414.00
Pre/Post	6.25	\$431.25

AET230 - Certified Flight Instructor		\$7,378.50
Dual Cessna 172/Piper Archer	24	\$5,184.00
Dual Single Engine ATD	1	\$159.00
Ground	21	\$1,449.00
Pre/Post	8.5	\$586.50

FSDO-approved minimum times per part 141 training course outlines.

Total: \$39,321.15

Commercial Pilot, Instrument Rating, Multi Engine Add On, and Certified Flight Instructor Courses (Part 141) – Starting Fall 2021

The below estimates represent minimum flight hours to meet Federal Aviation Administration requirements. Students may need additional flight hours to demonstrate competency.

Due to an FAA mandated change in curriculum, students beginning Commercial/Instrument flight training in Fall 2021 will be approved for the following funds.

The following rates and flight hours have been approved for VA funding at the UND Aerospace FTC located at Mesa, AZ. VA will only fund these minimum training requirements and students are required to cover additional costs. VA will only cover costs listed for each specific time requirement.

AET210 - Commercial Flight I (Lessons 1-8)		\$2,299.80
Dual Cessna 172/Piper Archer	6.4	\$1,382.40
Dual ATD	3.6	\$572.40
Ground	1.5	\$103.50
Pre/Post	3.5	\$241.50

AET220 - Instrument Flight (Lessons 1-31)		\$10,108.80
Dual Cessna 172/Piper Archer	27.5	\$5,940.00
Dual ATD	13.2	\$2,098.80
Ground	17.0	\$1,173.00
Pre/Post	13.0	\$897.00

AET221 - Commercial Flight II (Lessons 9-26)		\$9,354.90
Dual Cessna 172/Piper Archer	24.0	\$5,184.00
Solo Cessna 172/Piper Archer	19.8	\$2,910.60
Dual ATD	1.2	\$190.80
Ground	5.5	\$379.50
Pre/Post	10.0	\$690.00
AET222 - Commercial Flight III (Lessons 27-44)		\$9,507.30
Dual Cessna 172/Piper Archer	22.5	\$4,860.00
Solo Cessna 172/Piper Archer	20.1	\$2,954.70
Dual ATD	2.4	\$381.60
Ground	9.0	\$621.00
Pre/Post	10.0	\$690.00
AET239 - Instrument Commercial Flight IV (Lessons 45-54)		\$4,423.50
Dual Cessna 172/Piper Archer	10.5	\$2,268.00
Solo Cessna 172/Piper Archer	9.5	\$1,396.50
Ground	4.5	\$310.50
Pre/Post	6.5	\$448.50
AET240 - Multi-Engine Systems & Procedures (Lessons 1-15)		\$6,659.80
Dual Seminole	14.0	\$4,984.00
Dual ATD	4.0	\$696.00
Ground	8.7	\$600.30
Pre/Post	5.5	\$379.50
AET230 - Certified Flight Instructor		\$7,378.50
Dual Cessna 172/Piper Archer	24.0	\$5,184.00
Dual Single Engine ATD	1.0	\$159.00
Ground	21	\$1,449.00
Pre/Post	8.5	\$586.50

FSDO-approved minimum times per part 141 training course outlines.

Total: \$50,061.85

2021-2022 Projected Individual Flight Training Costs – Students in Commercial/Instrument Training Prior to Fall 2021

These are the projected costs for flight courses for the 2021-2022 school year based on anticipated rates (*). Course costs are based on the average number of hours it takes a student to complete the course, and may vary from student to student according to their capability and motivation. Financial aid may be available to assist with these costs, but applying for aid must be done well in advance. Flight costs are in addition to tuition.

Instrument, Commercial and Multi-Engine

AET220 - Instrument Commercial Flight II (Lessons 37-68)		\$14,476.00
Instructor Time		82 hrs
S.E. Simulator		8 hrs
Piper Archer		56 hrs
FAA Written**		(2) hrs

AET240 - Multi-Engine Systems & Procedures (Lessons 69-94)		\$12,390.00
Instructor Time		65 hrs
M.E. Simulator		10 hrs
Seminole		25 hrs

Flight Instructor

AET230 - Certified Flight Instructor Certification		\$8,558.00
Instructor Time		58 hrs
Piper Archer		28 hrs
S.E. Simulator		1 hr
FAA Written**		(2) hrs

Associate Degree program total flight cost: \$64,581.00. (Fees are subject to change)

*Does not include AET270 CFII **FAA written price of \$175.00 included in the budgeted total for each applicable course.

Students using veterans' educational benefits will only be certified for the actual cost and required flight hours of the program as identified on page 9.*AET110 - Private Pilot Certification is a prerequisite.

2021-2022 Projected Individual Flight Training Costs – For New Students or Students Beginning Commercial/Instrument Training in Fall 2021

These are the projected costs for flight courses for the 2021-2022 school year based on anticipated rates (*). Course costs are based on the average number of hours it takes a student to complete the course, and may vary from student to student according to their capability and motivation. Financial aid may be available to assist with these costs, but applying for aid must be done well in advance. Flight costs are in addition to tuition.

Private Pilot

AET110 - Private Pilot Certification		\$14,878.00
Instructor Time		92 hrs
S.E. Simulator		3 hrs
Piper Archer		55 hrs
FAA Written**		(1) hr

AET112 - Private Pilot Test Course		\$3,705.00
Instructor Time	26 hrs	
Piper Archer	13 hrs	
AET112 - Requires Private Pilot certificate prior to initiating training with CGCC		

Instrument, Commercial and Multi-Engine

AET210 - Commercial Flight I (Lessons 1-8)		\$2,299.80
Instructor Time	15 hrs	
S.E. Simulator	3.6 hrs	
Piper Archer	6.4 hrs	

AET220 - Instrument Flight (Lessons 1-31)		\$10,283.80
Instructor Time	70.7 hrs	
S.E. Simulator	13.2 hrs	
Piper Archer	27.5 hrs	
FAA Written**	(2) hrs	

AET221 - Commercial Flight II (Lessons 9-26)		\$9,354.90
Instructor Time	40.7 hrs	
M.E. Simulator	1.2 hrs	
Seminole	43.8 hrs	

AET222 - Commercial Flight III (Lessons 27-44)		\$9,682.30
Instructor Time	43.9 hrs	
S.E. Simulator	2.4 hrs	
Piper Archer	42.6 hrs	
FAA Written**	(1)	

AET239 - Instrument Commercial Flight IV (Lessons 45-54)		\$4,423.50
Instructor Time	21.5 hrs	
Piper Archer	20	

AET240 - Multi-Engine Systems & Procedures (Lessons 1-15)		\$6,659.80
Instructor Time	32.2 hrs	
M.E. Simulator	4 hrs	
Piper Seminole	14 hrs	

Flight Instructor

AET230 - Certified Flight Instructor Certification		\$8,558.00
Instructor Time	58 hrs	
Piper Archer	28 hrs	
S.E. Simulator	1 hr	
FAA Written**	(2) hrs	

Associate Degree program total flight cost: \$66,140.10. (Fees are subject to change)

*Does not include AET270 CFII **FAA written price of \$175.00 included in the budgeted total for each applicable course.

Students using veterans' educational benefits will only be certified for the actual cost and required flight hours of the program as identified on page 9.*AET110 - Private Pilot Certification is a prerequisite.