



# HISTORY OF POSITIVE CHANGE WOMEN IN AN AEROCENTRIC WORKFORCE

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**OKLAHOMA AERONAUTICS**

OKLAHOMA'S AVIATION AND AEROSPACE INDUSTRY IS THE STATE'S SECOND-LARGEST ECONOMIC ENGINE, SUPPORTING MORE THAN 206,000 JOBS AND GENERATING AN ECONOMIC IMPACT OF \$43.7 BILLION



**1,100**  
Aerospace entities including MRO, research, and military.

**120,000**  
Oklahomans employed in Aerospace and Defense.

**86%**  
Increase in Engineering Graduates since 2014.

Oklahoma's Aviation & Aerospace industry supports more than  
**206,000**  
jobs with an average salary of \$73,300 annually.



Oklahoma's Aviation & Aerospace is the state's second largest industry with a total of  
**\$44B**  
in annual statewide economic activity.

**AVIATION & AEROSPACE**



## PIONEERING OKLAHOMA WOMEN IN AVIATION

Bessie Coleman is the first African American to earn a pilot's license, and has ties to Oklahoma and Langston University.

**1921**

Pearl Carter Scott became the youngest pilot in the United States with her first solo flight on Sep. 12, 1929. She later worked as a stunt pilot where she performed until ending her career to focus on her family.

**1929**

Jerrie Cobb set three aviation records in her 20s: the 1959 world record for nonstop long-distance flight, the 1959 world light-plane speed record, and a 1960 world altitude record for lightweight aircraft of 37,010 feet.

**1959**

In 1978, Dr. Shannon Lucid was recruited by NASA for astronaut training with NASA Astronaut Group 8, the first class of astronauts to include women. She flew in space five times.

**1978**

Oklahoma Women in Aviation and Aerospace Day began in 2017 when the Aeronautics Commission presented a bill to the Oklahoma legislature, which was enacted into law, to officially recognize the contribution of Oklahoma women in the State's aviation and aerospace industry.

**2017**



195  
5

The 99s Headquarters moved from New York City to the Will Rogers World Airport Terminal Bldg. in Oklahoma City. In 1972, The 99s Museum of Women Pilots was Initiated by the 99s and in 1975, land became available to build their current headquarters facility.



# Field of Roses at Tinker Air Force Base

During the war years thousands of Oklahomans and military personnel from across the United States laid the foundation of Tinker's reputation for excellence in depot repair and maintenance. At the employment high point in late 1943, 13,500 people worked at the air depot, while another 23,000 worked for Douglas Aircraft. Nearly one-half of all the Tinker and Douglas workers were women who exemplified the famed "Rosie-the-Riveter."





# COL. ABIGAIL RUSCETTA, TINKER AFB

As of July 2023, Colonel Abigail L. W. Ruscetta is the 72nd Air Base Wing Commander, Tinker Air Force Base, Oklahoma. She leads nearly 3,000 Airmen and is responsible for \$5.4 billion in resources and a \$311 million operating budget. Colonel Ruscetta has been in the Air Force since 1997. She has worked at bases across the nation and in Germany,





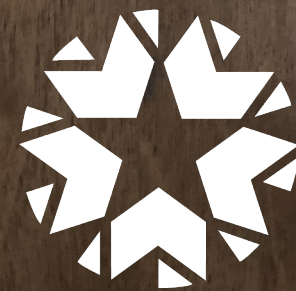
**OKLAHOMA HAS  
MORE THAN  
5,716 GENERAL  
AVIATION  
AIRCRAFT THAT  
ARE ACTIVELY  
FLYING IN THE  
STATE AND  
NEARLY 9,600  
PILOTS.**



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AT ANY GIVEN  
MOMENT, THERE  
ARE ABOUT 61,000  
PEOPLE AIRBORNE  
OVER THE  
MAINLAND UNITED  
STATES. AT  
CHICAGO-O'HARE  
AIRPORT, ONE OF  
THE WORLD'S  
BUSIEST, PLANES  
TAKE OFF OR LAND  
EVERY 37 SECONDS.  
MORE THAN 29,000  
FLIGHTS OPERATE  
FROM THE U.S.  
ALONE EVERY DAY.

**PILOT'S LOUNGE**



**OKLAHOMA**  
Aeronautics



## Pilots

Source: FAA's Aeronautical Center (December 31st, 2020 data)

All		Women	
691,691	Pilots (total)	58,541	8.4%
222,629	Students	31,687	14.2%
105	Recreational	6	5.7%
6,643	Sport	259	3.9%
160,860	Private*	11,316	6.6%
103,879	Commercial*	7,724	7.0%
164,193	Airline Transport*	7,549	4.6%
13,629	Rotorcraft (only)	NA	NA
19,753	Glider (only)	NA	NA
117,558	Flight Instructors**	8,592	7.3%
206,322	Remots Pilots***	14,882	7.2%

## \*Pilots (Women)

Source: FAA's Aeronautical Center (December 31st, 2020 data)

	2020		2019		2018		2017		2016
Student (1)	31,687	14.2%	27,255	13.8%	22,266	13.3%	19,219	9.8%	15,971
Recreational	6	5.7%	7	5.5%	10	6.9%	14	10.5%	15
Sport	259	3.9%	254	3.9%	240	3.8%	229	3.5%	223
Private	11,316	6.6%	10,683	6.6%	10,255	6.3%	9,971	7.0%	10,009
Commercial	7,724	7.0%	7,038	7.0%	6,556	6.6%	6,267	6.7%	6,081
Airline Transport	7,549	4.6%	7,503	4.5%	7,136	4.4%	6,994	4.1%	6,888
Flight Instructor (2)	8,592	7.3%	7,957	7.0%	7,335	6.8%	7,105	6.3%	6,848
Remote Pilots (3)	14,882	7.2%	10,818	6.7%	6,188	5.8%	3,462	48.7%	793
Total	58,541	8.4%	52,740	7.9%	46,463	7.3%	42,694	6.8%	39,187



## Non-Pilots

Source: FAA's Aeronautical Center (December 31st, 2020 data)

All		Women	
724,307	NonPilot (total)	218,964	30.2%
306,301	Mechanic*	7,860	2.6%
36,741	Repairmen*	1,995	5.4%
7,014	Parachute Rigger*	711	10.1%
71,991	Ground Instructor*	5,603	7.8%
23,286	Dispatcher*	4,586	19.7%
36	Flight Navigator	0	
248,742	Flight Attendant	196,902	79.2%
30,196	Flight Engineer	1,307	4.3%

## Non-Pilot (Women)

Source: FAA's Aeronautical Center (December 31st, 2020 data)

	2020		2019		2018		2017		2016
<b>NonPilot (total)</b>	218,964	30.2%	215,905	30.2%	203,725	29.6%	195,993	27.3%	187,914
<b>Mechanic*</b>	7,860	2.6%	7,573	2.5%	7,133	2.4%	6,855	2.9%	6,536
<b>Repairmen*</b>	1,995	5.4%	1,996	5.5%	1,868	5.3%	1,847	6.5%	1,822
<b>Parachute Rigger*</b>	711	10.1%	681	10.0%	631	9.8%	597	13.1%	540
<b>Ground Instructor*</b>	5,603	7.8%	5,340	7.6%	5,085	2.1%	4,924	2.4%	4,771
<b>Dispatcher*</b>	4,586	19.7%	4,389	19.4%	4,086	19.0%	3,867	21.8%	3,615
<b>Flight Navigator</b>	0	0	0	0	0	0	0	0	1
<b>Flight Attendant**</b>	196,902	79.2%	194,578	79.2%	183,519	79.3%	176,471	71.9%	169,170
<b>Flight Engineer</b>	1,307	4.3%	1,348	4.3%	1,403	4.2%	1,432	4.7%	1,458

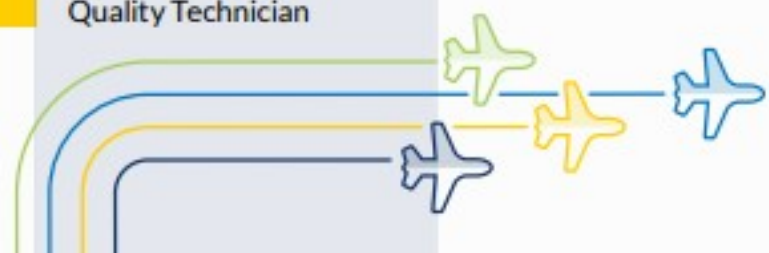






# AVIATION CAREERS

PILOT CAREERS	AIRLINES AND AIRPORT OPERATORS	AIRCRAFT AND SYSTEMS MAINTENANCE	AIRLINES AND AIRPORT SERVICES
<ul style="list-style-type: none"> <li>Major/National Airline Pilot</li> <li>Regional Airline Pilot</li> <li>Flight Instructor</li> <li>Military Pilot</li> <li>Corporate Pilot</li> <li>Astronaut</li> <li>Air Traffic Reporting Pilot</li> <li>Helicopter Pilot</li> <li>Agricultural Pilot</li> </ul>	<ul style="list-style-type: none"> <li>Airport Manager</li> <li>Station Manager</li> <li>Ramp Planner</li> <li>Flight Dispatcher</li> <li>Lineperson</li> <li>Ground Attendant</li> <li>Ramp Service Personnel</li> <li>Fixed Base Operator</li> <li>Cabin Maintenance Mechanic</li> <li>Safety Inspector</li> <li>Scheduling Coordinator</li> <li>Air Traffic Controller</li> <li>Concession Worker</li> <li>Fire &amp; Crash Rescue</li> </ul>	<ul style="list-style-type: none"> <li>Airframe and Powerplant Mechanic</li> <li>Avionics Specialist</li> </ul>	<ul style="list-style-type: none"> <li>Ticket Agent</li> <li>Flight Attendant</li> <li>Sky Cap</li> <li>Cargo Handler</li> <li>Passenger Service Agent</li> <li>Operations Supervisor</li> <li>Baggage Handler</li> <li>Air Freight/Cargo Agent</li> <li>Reservations Sales Agent</li> </ul>
SCIENCE AND TECHNICAL SERVICES	LAW-RELATED SERVICES	HEALTH SERVICES	OTHER PROFESSIONALS
<ul style="list-style-type: none"> <li>Cartographer</li> <li>Technician</li> <li>Meteorologist</li> <li>Architect</li> <li>Engineer</li> </ul>	<ul style="list-style-type: none"> <li>Aviation Attorney</li> <li>Inspector</li> <li>Accident Investigator</li> <li>Security Specialist</li> </ul>	<ul style="list-style-type: none"> <li>Flight Physician</li> <li>Aviation Medical Examiner</li> </ul>	<ul style="list-style-type: none"> <li>Travel Agent</li> <li>Secretary/Admin. Asst.</li> <li>Information Systems Specialist</li> </ul>
FOOD SERVICES	AIRCRAFT MANUFACTURING OCCUPATIONS		
<ul style="list-style-type: none"> <li>Food Preparer</li> </ul>	<ul style="list-style-type: none"> <li>Manufacturing Engineer</li> <li>Electrical Installers &amp; Technicians</li> <li>Tool, Jig &amp; Fixture Maker</li> <li>Machine Tool Operator</li> <li>Sheet Metal Fabrication</li> <li>Assemblers &amp; Installer</li> <li>Quality Technician</li> </ul>		





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## AVIATION & AEROSPACE LEGISLATION



- 2023 Agency Name Change to Oklahoma Department of Aerospace and Aeronautics.
- 2023 AeroSPACE Education Program created within Aeronautics Commission.
- 2022 Aerospace STEM curriculum counts for core credit in high school.
- 2021 UAS clearinghouse within Aeronautics Commission.
- 2019 Protection for military airspace from tall structures.
- 2018 ACES program to support aerospace industry.
- 2018 Charter aircraft excise tax 50% use requirement.
- 2017 Women in Aviation & Aerospace Day in statute.
- 2017 Oklahoma Aviation & Aerospace Day in statute.
- 2014 Meteorological Evaluation Towers (METs) marking.
- 2013 Recreational immunity for activities at private airports.
- 2010 Aircraft Pilot & Passenger Protection Act protects airports from incompatible land development.
- 2008 Aerospace Engineer Tax Credits.
- 2005 MRO Sales Tax Exemption aircraft maintenance.



On the morning of Saturday, December 9th the Oklahoma Airport Operators Association (OAOA) and the Oklahoma Aeronautics Commission hosted the first annual, "Women in Aviation & Aerospace Day" at Wiley Post Airport.

Over 160 guests were in attendance, celebrating a day declared by Governor Mary Fallin (who is also a pilot) as the state's first Oklahoma Women in Aviation & Aerospace Day, commemorated on December 9th via statute SB 230. This date was specifically chosen since it was the birthdate of Oklahoma aviator Pearl Carter Scott of Marlow, Oklahoma, who was a member of the Chickasaw Nation. Pearl learned to drive at the age of 12, and then learned to fly at the age of 13 under the tutelage of legendary aviator Wiley Post. She was one of the youngest pilots in the United States, taking her solo flight on September 12, 1929 and later becoming a stunt pilot. Pearl passed away in March 2005 but her legacy remains strong.











The **SPIRIT** of  
**AVIATION**

Celebrating  
Oklahoma's Women  
in Aviation and  
Space





# Oklahoma Commerce Aerospace & Defense Team



Business support,  
tax incentives,  
trade services and  
B2B events.

**Imagine that.**



# Oklahoma CareerTech



In-demand skills  
training for  
real-world jobs.  
**Imagine that.**



# Oklahoma Aeronautics Commission



Airport Infrastructure,  
Workforce Development,  
Aerospace Legislative  
Advocacy, Aviation Safety

**Imagine that.**



# Oklahoma Manufacturing Alliance



Your vision  
is our mission.  
**Imagine that.**



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