

# AIRFRAME AND POWERPLANT CERTIFICATE

This is a one-year program, usually starting at the beginning of September. Entry at other times is allowed only with departmental approval. A personal background check and drug test will be required prior to acceptance into the airframe and powerplant, airframe or powerplant certificate programs.

## Airframe Certificate Requirements

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## Minimum Requirements for Airframe Certificate: 31 credits

Students must earn a C- grade or better in each course.

Code	Title	Credits
<b>General University Requirements</b>		
Complete the general university requirements. ( <a href="https://catalog.uaf.edu/certificates/#gurcertificatestext">https://catalog.uaf.edu/certificates/#gurcertificatestext</a> )		
<b>Certificate Requirements</b>		
Complete the certificate requirements. ( <a href="https://catalog.uaf.edu/certificates/#certificatestext">https://catalog.uaf.edu/certificates/#certificatestext</a> ) <sup>1</sup>		
<b>Airframe Program Requirements</b>		
Complete the following:		
AFPM F145	Basic Mathematics	1
AFPM F146	Basic Electricity	2
AFPM F147	Physics for Mechanics	0.5
AFPM F148	Aircraft Drawing	1
AFPM F149	Fluid Lines and Fittings	0.5
AFPM F150	Materials and Processes	2
AFPM F151	Cleaning and Corrosion Control	1
AFPM F152	Federal Aviation Regulations	1
AFPM F153	Weight and Balance	1
AFPM F154	Ground Operations and Servicing	0.5
<b>Airframe Structures Requirements</b>		
Complete the following:		
AFPM F261	Nonmetallic Structures	1
AFPM F262	Aircraft Coverings	1
AFPM F263	Aircraft Finishes	0.5
AFPM F264	Sheet Metal Structures	3
AFPM F265	Aircraft Welding	1.5
AFPM F266	Assembly and Rigging	1.5
AFPM F267	Airframe Inspections	0.5
AFPM F270	Airframe Testing	0.5
<b>Airframe Systems and Components Requirements</b>		
Complete the following:		
AFPM F230	Aircraft Electrical Systems	2.5
AFPM F253	Transport Category Aircraft	1
AFPM F254	Ice and Rain Control Systems	0.5
AFPM F256	Communications and Navigation Systems	0.5

AFPM F258	Cabin Atmosphere Control Systems	1
AFPM F259	Hydraulic and Pneumatic Systems	1.5
AFPM F260	Aircraft Landing Gear Systems	1.5
<b>Combined Systems and Components Requirements</b>		
Complete the following:		
AFPM F251	Fuel Systems	1.5
AFPM F255	Fire Protection Systems	0.5
AFPM F257	Instrument Systems	0.5
<b>Total Credits</b>		<b>31</b>

<sup>1</sup> As part of the certificate requirements, the communication, computation and human relations contents are embedded in the major required courses for this program.

## Powerplant Certificate Requirements

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## Minimum Requirements for Powerplant Certificate: 31 credits

Students must earn a C- or better in each course.

Code	Title	Credits
<b>General University Requirements</b>		
Complete the general university requirements. ( <a href="https://catalog.uaf.edu/certificates/#gurcertificatestext">https://catalog.uaf.edu/certificates/#gurcertificatestext</a> )		
<b>Certificate Requirements</b>		
Complete the certificate requirements. ( <a href="https://catalog.uaf.edu/certificates/#certificatestext">https://catalog.uaf.edu/certificates/#certificatestext</a> ) <sup>1</sup>		
<b>Powerplant Program Requirements</b>		
Complete the following:		
AFPM F145	Basic Mathematics	1
AFPM F146	Basic Electricity	2
AFPM F147	Physics for Mechanics	0.5
AFPM F148	Aircraft Drawing	1
AFPM F149	Fluid Lines and Fittings	0.5
AFPM F150	Materials and Processes	2
AFPM F151	Cleaning and Corrosion Control	1
AFPM F152	Federal Aviation Regulations	1
AFPM F153	Weight and Balance	1
AFPM F154	Ground Operations and Servicing	0.5
<b>Powerplant Theory and Maintenance Requirements</b>		
Complete the following:		
AFPM F235	Aircraft Reciprocating Engines	4.5
AFPM F240	Turbine Engines	2
AFPM F271	Powerplant Inspections	0.5
AFPM F272	Powerplant Testing	0.5
<b>Powerplant and Systems Components Requirements</b>		
Complete the following:		
AFPM F231	Powerplant Electrical Systems	1.5
AFPM F244	Lubricating Systems	1.5
AFPM F245	Ignition Systems	2
AFPM F246	Fuel Metering Systems	2

AFPM F248	Induction Systems	0.5
AFPM F249	Powerplant Cooling Systems	0.5
AFPM F250	Powerplant Exhaust Systems	0.5
AFPM F252	Propellers	2
<i>Combined Systems and Components Requirements</i>		
Complete the following:		
AFPM F251	Fuel Systems	1.5
AFPM F255	Fire Protection Systems	0.5
AFPM F257	Instrument Systems	0.5
<b>Total Credits</b>		<b>31</b>

<sup>1</sup> As part of the certificate requirements, the communication, computation and human relations content is embedded in the major required courses for this program.

**Note:** This is a one-year program, usually starting at the beginning of September. Entry at other times is allowed only with departmental approval. A personal background check and drug test will be required prior to acceptance into the airframe and powerplant, airframe or powerplant certificate programs.

## Airframe and Powerplant Certificate Requirements

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## Minimum Requirements for Airframe and Powerplant Certificate: 49 credits

Students must earn a C- or better in each course.

Code	Title	Credits
<b>General University Requirements</b>		
Complete the general university requirements. ( <a href="https://catalog.uaf.edu/certificates/#gurcertificatetext">https://catalog.uaf.edu/certificates/#gurcertificatetext</a> )		
<b>Certificate Requirements</b>		
Complete the certificate requirements. ( <a href="https://catalog.uaf.edu/certificates/#certificaterequirementstext">https://catalog.uaf.edu/certificates/#certificaterequirementstext</a> ) <sup>1</sup>		
<b>Airframe and Powerplant Program Requirements</b>		
Complete the following:		
AFPM F145	Basic Mathematics	1
AFPM F146	Basic Electricity	2
AFPM F147	Physics for Mechanics	0.5
AFPM F148	Aircraft Drawing	1
AFPM F149	Fluid Lines and Fittings	0.5
AFPM F150	Materials and Processes	2
AFPM F151	Cleaning and Corrosion Control	1
AFPM F152	Federal Aviation Regulations	1
AFPM F153	Weight and Balance	1
AFPM F154	Ground Operations and Servicing	0.5
<i>Airframe Structures Requirements</i>		
Complete the following:		
AFPM F261	Nonmetallic Structures	1
AFPM F262	Aircraft Coverings	1
AFPM F263	Aircraft Finishes	0.5

AFPM F264	Sheet Metal Structures	3
AFPM F265	Aircraft Welding	1.5
AFPM F266	Assembly and Rigging	1.5
AFPM F267	Airframe Inspections	0.5
AFPM F270	Airframe Testing	0.5
<i>Airframe Systems and Components Requirements</i>		
Complete the following:		
AFPM F230	Aircraft Electrical Systems	2.5
AFPM F253	Transport Category Aircraft	1
AFPM F254	Ice and Rain Control Systems	0.5
AFPM F256	Communications and Navigation Systems	0.5
AFPM F258	Cabin Atmosphere Control Systems	1
AFPM F259	Hydraulic and Pneumatic Systems	1.5
AFPM F260	Aircraft Landing Gear Systems	1.5
<i>Powerplant Theory and Maintenance Requirements</i>		
Complete the following:		
AFPM F235	Aircraft Reciprocating Engines	4.5
AFPM F240	Turbine Engines	2
AFPM F271	Powerplant Inspections	0.5
AFPM F272	Powerplant Testing	0.5
<i>Powerplant Systems and Components Requirements</i>		
Complete the following:		
AFPM F231	Powerplant Electrical Systems	1.5
AFPM F244	Lubricating Systems	1.5
AFPM F245	Ignition Systems	2
AFPM F246	Fuel Metering Systems	2
AFPM F248	Induction Systems	0.5
AFPM F249	Powerplant Cooling Systems	0.5
AFPM F250	Powerplant Exhaust Systems	0.5
AFPM F252	Propellers	2
<i>Combined Systems and Components Requirements</i>		
Complete the following:		
AFPM F251	Fuel Systems	1.5
AFPM F255	Fire Protection Systems	0.5
AFPM F257	Instrument Systems	0.5
<b>Total Credits</b>		<b>49</b>

<sup>1</sup> As part of the certificate requirements, the communication, computation and human relations contents are embedded in the major required courses for this program.