

# AVIATION SCIENCES (AVSC)

<b>AVSC 102 Flight School Orientation</b>	<b>3 Credit hours</b>	<b>AVSC 241 Cognition and Aviation Safety</b>	<b>3 Credit hours</b>
An orientation course for students enrolled in the flight school. Topics to include pilot training regulations and procedures, safety and security, federal aviation organizations, and career opportunities.		This course reviews the cognitive phenomena that influence aviation safety.	
<b>Grade Mode:</b> Normal Grading Mode		<b>Grade Mode:</b> Normal Grading Mode	
<b>AVSC 105 Transition Lab</b>	<b>1 Credit hour</b>	<b>AVSC 250 Commercial Phase II AMEL Lab</b>	<b>3 Credit hours</b>
Students admitted to the program who hold FAA certifications will learn the operation of Marshall's aircraft at a level commensurate with his or her FAA certification.		A course designed to prepare students to pass the Federal Aviation Administration Commercial Pilot Practical Exam for multi-engine airplane.	
<b>Grade Mode:</b> Credit/No Credit Grade Only		<b>Pre-req:</b> AVSC 235 (may be taken concurrently) with a minimum grade of D and (AVSC 225 with a minimum grade of D or AVSC 230 with a minimum grade of D).	
<b>AVSC 200 Private Pilot Ground School</b>	<b>4 Credit hours</b>	<b>Concurrent PR:</b> AVSC 235	
An introductory overview of aviation fundamentals as required by the Federal Aviation Administration regulations for students pursuing a Private Pilot certificate.		<b>Grade Mode:</b> Normal Grading Mode	
<b>Grade Mode:</b> Normal Grading Mode		<b>AVSC 280 Special Topics</b>	<b>1-4 Credit hours</b>
<b>AVSC 205 Solo Flight Lab</b>	<b>1 Credit hour</b>	<b>Grade Mode:</b> Normal Grading Mode	
Prepares students to complete the first solo flight. The course requires 15 flight hours that must be conducted for issuance of the grade.		<b>AVSC 281 Special Topics</b>	<b>1-4 Credit hours</b>
<b>Pre-req:</b> AVSC 200 (may be taken concurrently) with a minimum grade of D.		<b>Grade Mode:</b> Normal Grading Mode	
<b>Concurrent PR:</b> AVSC 200		<b>AVSC 282 Special Topics</b>	<b>1-4 Credit hours</b>
<b>Grade Mode:</b> Normal Grading Mode		<b>Grade Mode:</b> Normal Grading Mode	
<b>AVSC 210 Private Pilot Cert ASEL Lab</b>	<b>2 Credit hours</b>	<b>AVSC 283 Special Topics</b>	<b>1-4 Credit hours</b>
Prepares students to pass the FAA Private Pilot Practical Exam: ASEL. The course requires 20 flight hours that must be conducted for issuance of the grade.		<b>Grade Mode:</b> Normal Grading Mode	
<b>Pre-req:</b> AVSC 200 with a minimum grade of D and AVSC 205 (may be taken concurrently) with a minimum grade of D.		<b>AVSC 300 Tailwheel Transition Lab</b>	<b>1 Credit hour</b>
<b>Concurrent PR:</b> AVSC 205		Designed to prepare pilots to earn a tail-wheel endorsement from the Federal Aviation Administration.	
<b>Grade Mode:</b> Normal Grading Mode		<b>Pre-req:</b> AVSC 210 with a minimum grade of D or AVSC 260 with a minimum grade of D.	
<b>AVSC 215 Instrument Ground School</b>	<b>3 Credit hours</b>	<b>Grade Mode:</b> Normal Grading Mode	
A course designed to teach pilots to fly an airplane using only instruments as required by Federal Aviation Administration regulations for the Instrument Flight Rules rating.		<b>AVSC 305 CFII Lab</b>	<b>1 Credit hour</b>
<b>Pre-req:</b> AVSC 200 with a minimum grade of D.		Prepares pilots for the FAA Certified Flight Instructor Instrument Practical Exam. The course requires 10 flight and 2 simulator hours that must be conducted for issuance of the grade.	
<b>Grade Mode:</b> Normal Grading Mode		<b>Pre-req:</b> AVSC 245 with a minimum grade of D or AVSC 280 with a minimum grade of D.	
<b>AVSC 220 Instrument Certification Lab</b>	<b>3 Credit hours</b>	<b>Grade Mode:</b> Normal Grading Mode	
Prepares students to pass the FAA Instrument Practical Exam. The course requires 36 flight and 14 simulator hours that must be conducted for issuance of the grade.		<b>AVSC 310 Aerodynamics &amp; Performance</b>	<b>3 Credit hours</b>
<b>Grade Mode:</b> Normal Grading Mode		Students learn about complex aircraft aerodynamics and performance related to method of propulsion, the interactive forces that affect performance, flight conditions experienced by commercial pilots, and transonic and supersonic flight.	
<b>AVSC 221 Systems Management</b>	<b>3 Credit hours</b>	<b>Grade Mode:</b> Normal Grading Mode	
This course will provide students with a comprehensive survey of fixed wing aircraft systems that affect all aspects of a flight related to safety, efficiency, navigation, and customer comfort.		<b>AVSC 311 Aircraft Systems</b>	<b>3 Credit hours</b>
<b>Grade Mode:</b> Normal Grading Mode		Students learn about aircraft system related to propulsion; fuel; cabin pressure, oxygenation, and HVAC; fire control, ice abatement; landing and breaking, and hydraulic and pneumatic controls of flight surfaces.	
<b>AVSC 231 Aviation Law and Regulations</b>	<b>3 Credit hours</b>	<b>Grade Mode:</b> Normal Grading Mode	
This course familiarizes students with the Federal Aviation Regulation, certification standards, air transportation operational oversight and law governing commercial aviation.		<b>AVSC 315 Airport Operations and Mgmt</b>	<b>3 Credit hours</b>
<b>Grade Mode:</b> Normal Grading Mode		This course familiarizes students with the Federal Aviation Regulations relating to certification of airport systems and examines the policies and procedures for the Airport Improvement Plan (AIP).	
<b>AVSC 230 Flight Phys and Human Factors</b>	<b>3 Credit hours</b>	<b>Grade Mode:</b> Normal Grading Mode	
This course familiarizes students with the Federal Aviation Regulations relating to flight physiology, oxygen systems, and human factors impacting pilot flight operations.		<b>AVSC 320 Flight Phys and Human Factors</b>	<b>3 Credit hours</b>
<b>Grade Mode:</b> Normal Grading Mode		This course familiarizes students with the Federal Aviation Regulations relating to flight physiology, oxygen systems, and human factors impacting pilot flight operations.	
		<b>Grade Mode:</b> Normal Grading Mode	

<p><b>AVSC 325 Evolution of ATC Systems</b> <b>3 Credit hours</b> Students will learn about USA's ATC system, Federal Aviation Regulations, procedures, navigational aids, radar and nonradar operations, airspace and control tower communications, and operations required in different geographic areas. <b>Grade Mode:</b> Normal Grading Mode</p>	<p><b>AVSC 410 Air Transportation Operations</b> <b>3 Credit hours</b> An overview of the airline industry and an in-depth analysis of key management functions within an airline. <b>Grade Mode:</b> Normal Grading Mode</p>
<p><b>AVSC 329 Commercial Ground School</b> <b>3 Credit hours</b> A study of commercial flight fundamentals as required by Federal Aviation Administration regulations for students pursuing a Commercial Pilot certificate. <b>Pre-req:</b> AVSC 215 with a minimum grade of D. <b>Grade Mode:</b> Normal Grading Mode</p>	<p><b>AVSC 420 International Aviation</b> <b>3 Credit hours</b> Review of international flights including planning, documentation, navigation, international regulations, safety, and respect for local cultures. <b>Grade Mode:</b> Normal Grading Mode</p>
<p><b>AVSC 330 Commercial Phase I Lab</b> <b>3 Credit hours</b> Develops flying in VFR and IFR environments and decision-making skills. The course requires 52.5 flight and 17.5 simulator hours that must be conducted for issuance of the grade. <b>Pre-req:</b> AVSC 220 with a minimum grade of D and AVSC 226 with a minimum grade of D. <b>Grade Mode:</b> Normal Grading Mode</p>	<p><b>AVSC 450  Crew Resource Management</b> <b>3 Credit hours</b> Within this capstone course, students will examine the principles of proper crew collaboration that reduce the risk of accidents caused by human behavior. <b>Attributes:</b> Capstone Course <b>Grade Mode:</b> Normal Grading Mode</p>
<p><b>AVSC 335 CFI Ground School</b> <b>3 Credit hours</b> Review the instruction fundamentals required by the FAA for pilots pursuing a Certified Flight Instructor rating. <b>Pre-req:</b> AVSC 329 with a minimum grade of D. <b>Grade Mode:</b> Normal Grading Mode</p>	<p><b>AVSC 454 Drones: Remote Sensing &amp; GIS</b> <b>3 Credit hours</b> Learn FAA rules and safety procedures; prepare for Remote Pilot licensing exam; operate drones to collect remote sensing data; process imagery for analysis; integrate sUAS imagery with existing GIS data. <b>Grade Mode:</b> Normal Grading Mode</p>
<p><b>AVSC 340 Commercial Phase II ASEL Lab</b> <b>3 Credit hours</b> Prepares students for the FAA ASEL Commercial Practical Exam. The course requires 43.5 flight and 6.5 simulator hours that must be conducted for issuance of the grade. <b>Pre-req:</b> AVSC 329 (may be taken concurrently) with a minimum grade of D and AVSC 330 (may be taken concurrently) with a minimum grade of D. <b>Concurrent PR:</b> AVSC 329 and AVSC 330 <b>Grade Mode:</b> Normal Grading Mode</p>	<p><b>AVSC 480 Special Topics</b> <b>1-4 Credit hours</b> <b>Grade Mode:</b> Normal Grading Mode</p>
<p><b>AVSC 345 Initial CFI ASEL Lab</b> <b>3 Credit hours</b> Trains students to be FAA-certified flight instructors. The course requires 20 flight and 2 simulator hours that must be conducted for issuance of the grade. <b>Pre-req:</b> AVSC 340 with a minimum grade of D. <b>Grade Mode:</b> Normal Grading Mode</p>	<p><b>AVSC 481 Special Topics</b> <b>1-4 Credit hours</b> <b>Grade Mode:</b> Normal Grading Mode</p>
<p><b>AVSC 355 Aviation Weather</b> <b>3 Credit hours</b> A study of atmospheric conditions on aeronautic operations. Topics include atmospheric properties, aviation hazards including thunderstorms, wind shear, turbulence, icing, and weather flight resources. <b>Pre-req:</b> GEO 230 with a minimum grade of D. <b>Grade Mode:</b> Normal Grading Mode</p>	<p><b>AVSC 482 Special Topics</b> <b>1-4 Credit hours</b> <b>Grade Mode:</b> Normal Grading Mode</p>
<p><b>AVSC 375 Commercial AMEL Add-On Lab</b> <b>1 Credit hour</b> Preparation for the FAA multi-engine Instrument Practical and Commercial Pilot Add-On Practical exams. The course requires 12 multi-engine flight hours that must be conducted for issuance of the grade. <b>Grade Mode:</b> Normal Grading Mode</p>	<p><b>AVSC 483 Special Topics</b> <b>1-4 Credit hours</b> <b>Grade Mode:</b> Normal Grading Mode</p>
<p><b>AVSC 405 Business Aviation</b> <b>3 Credit hours</b> This capstone is a study of business aviation operations, management, and finance to include corporate, fractional, charter, Fixed Base Operator (FBO), and various aviation business models. <b>Grade Mode:</b> Normal Grading Mode</p>	<p><b>AVSC 495 Internship in Aviation Ops</b> <b>3 Credit hours</b> Student will participate in an internship as coordinated with their assigned advisor. The internship allows students to apply those flight instruction and classroom instruction skillsets appropriate to the respective internship. <b>Grade Mode:</b> Normal Grading Mode</p>