

# AVIATION SCIENCES (AVS)

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## **AVS 4318 Avionics System Design (3)**

Cross-listed as ELC 4318  
See ELC 4318 for course information.

## **AVS 4321 Energy Economics (3)**

Cross-listed as ENV 4321  
See ECO 4321 for course information.

## **AVS 4323 The Environment and Economic Analysis (3)**

Cross-listed as ECO 4323, ENV 4323  
See ENV 4323 for course information.

## **AVS 4386 Remote Sensing (3)**

Cross-listed as BIO 4386, ENV 4386, GEO 4386  
See GEO 4386 for course information.

## **AVS 4485 Introduction to Geographic Information Systems (4)**

Cross-listed as ENV 4384, ENV 4485, GEO 4485  
See GEO 4485 for course information.

## **AVS 4487 Advanced GIS Analysis (4)**

Cross-listed as AVS 4387, ENV 4487, GEO 4487  
See ENV 4487 for course information.

## **AVS 5320 Instrumentation and Test Stand Laboratory (3)**

Pre-requisite(s): AVS 4305 and credit or concurrent enrollment in AVS 4320 and 4330

A laboratory-based course where students gain hands-on experience with (i) modern equipment used to measure air pollution levels;(ii) contemporary engine test equipment for both piston and turbine aircraft engines, including dynamometers and exhaust emission analysis instrumentation; and (iii) the computer software and hardware to enable data collection and reduction via either data loggers and computer manipulation, or by direct computer data capture.

## **AVS 5330 Development of Biofuels in Aviation (3)**

Pre-requisite(s): AVS 1312 (or its equivalent); CHE 1301 or AVS 4330 (or their equivalents)

Rationale for developing and using biofuels in aviation. History of the development of biofuels as aviation fuels. History of fossil fuels. International experience in aviation biofuels. Environmental, economic, and energy security factors. Technical considerations and testing procedures including FAA certification procedures.

## **AVS 5368 Integrated Energy Resource Systems (3)**

Cross-listed as ENV 5368  
See ENV 5368 for course information.

## **AVS 5391 Measurement Methods and Data Analysis for Air Pollution (3)**

Cross-listed as ENV 5391  
See ENV 5391 for course information.

## **AVS 5393 Atmospheric Chemistry & Physics (3)**

Cross-listed as ENV 5393  
See ENV 5393 for course information.

## **AVS 5V99 Research for Master's Thesis (1-6)**

Pre-requisite(s): Consent of instructor  
Research, data analysis, writing, and oral defense of an approved master's thesis. At least six hours of AVS 5V99 are required.