

## AE 6334 - Rotorcraft Design II

**Catalog Data:**

Prerequisite: AE 6330.

Students work together on this application to complete the preliminary design stage of a specific rotorcraft. Participants are exposed to disciplinary and interdisciplinary issues.

**Textbook:** "Engineering Design Handbook, Helicopter Engineering - Part One: Preliminary Design" U.S. Army Material Command, Aug. 1974.

**References:** Course notes and select papers relevant to rotorcraft design.

**Coordinator:** Dr. Daniel Schrage, professor of A.E.

**Goals:** The course builds upon the material learned and conceptual design work completed in AE6330, to accomplish preliminary design of a rotorcraft. The objectives are:

- (a) to examine the implementation of the skills learned in AE6330, by carrying the conceptual design developed in AE6331 through the preliminary design.
- (b) to introduce students to both specific disciplinary needs and interdisciplinary needs .
- (c) to allow students to learn how to apply their disciplinary knowledge to a multidisciplinary design project.

**Topics:**

1. Elements of preliminary-level aerospace systems design.
2. Experience in applying disciplinary skills and knowledge within a multidisciplinary environment.
3. Execution and completion of a preliminary vehicle design effort.
4. Student presentation of results to a combined Industry/Government/Academia review board.

**Computer Usage:**

Familiarity with programming (FORTRAN) and scripting (UNIX,Tk/Tcl) languages.  
Working knowledge in use of UNIX, PC, and Macintosh computing platforms.  
Knowledge of pertinent computational analysis and design tools.