

## **Computational Fluid Dynamics Online Graduate Certificate**

Department of Aerospace Engineering, University of Kansas

### **Purpose**

This certificate will provide knowledge and education in the area of computational fluid dynamics. Completing this certificate will enable the student to use CFD tools effectively in the design process. The program will be offered through KU Center for Online and Distance Learning and consist of a 12-credit sequence of graduate courses. The courses will consist of recorded lectures delivered using streaming media technology as well as teacher-student interaction via chat room, e-mail, and phone conversations.

### **Admission Requirements**

The program will be most appropriate for those individuals with a bachelor's degree in a scientific and engineering discipline, who are pursuing a professional career, and who already have a strong base of engineering skills, including an understanding of fluid mechanics or aerodynamics.

The program will require that admitted students have degrees from an accredited university and have graduated with a GPA that places them in the upper half of their graduating class. Candidates may be considered for admission by the Computational Fluid Dynamics supervisory committee if they do not meet all these requirements but otherwise show clear potential. However, all students must meet the university's minimum requirements for admission to the graduate college.

Admission into the certificate program will not guarantee admission into the masters or doctoral programs. If a student who receives a certificate wishes to obtain admission into the masters or doctoral programs, the student will need to apply for admission and gain acceptance by meeting the admission requirements of these programs. Credits earned toward the certificate may be counted for the masters and doctoral degree requirements if approved by the student's program of study committee.

### **Certificate Requirements**

#### **Mandatory Courses (6 credits)**

AE 746. Computational Fluid Dynamics and Heat Transfer

AE 846 Advanced Computational Fluid Dynamics



Two Elective Courses (6 credits) from:

AE 743 Compressible Aerodynamics

AE 744 Introduction to Turbulent Flow

AE 748 Helicopter Aerodynamics

**Assessment**

All the online courses will be assessed in the same way as regular graduate courses. Home works, exams and projects will be used as assessing tools. The exams will be monitored by proctors appointed by KU Center for Online and Distance Learning.

**Contact Information**

Z.J. Wang  
Spahr Professor and Chair  
Department of Aerospace Engineering  
University of Kansas  
zjw@ku.edu