

**EMBRY-RIDDLE AERONAUTICAL UNIVERSITY**  
**Engineering Science**

**Course:** ES 206 Fluid Mechanics  
**Instructor:** Dr. Tom Gally  
gallyt@erau.edu

**Term:** Spring 2010  
**Office:** AC1 320

**Hours:** <http://pr.erau.edu/gallyt/officehours.html>

**Phone:** 777-3931

**Text:** *Fundamentals of Fluid Mechanics* by Munson, Young, and Okiishi, 5<sup>th</sup> Ed.

**Goals:** Lay down the basic theoretical principles for understanding and predicting the behavior of fluids at rest and in motion.

**Evaluation:**

Homework	10%
Exams (3 @ 20% each)	60%
Final (12:30-2:30, 5/3/10)	30%
A =90-100% B=80-89% C=70-70% D=60-69% F<60%	

**Class Attendance:**

There will be no role taken, so attendance is up to the discretion of the student, with the following caveats: (1) attendance at exams is mandatory – make up exams will be allowed only for university excused absences; (2) the student is solely responsible for assignments, announcements, and lectures provided during class.

**Homework:**

I have assigned homework solely as a learning aide for the students. Homework will not be graded, but will receive either a 2, 1, or 0 based upon the level of completeness. Homework will be due at the beginning of class on the due date. Late homework will not be accepted for credit.

**Other Policies:**

All other rules of conduct from the student handbook/student services CD apply.

**Course Topics**

Characteristics of Fluids	Fluid Properties and Units
Pressure at a Point	Hydrostatic Equation
Standard Atmosphere	Pressure Measurement
Forces on Plane Surfaces	Bouyancy and Flotation
Fluids in Rigid-Body Motion	Basic Fluid Dynamics
Bernoulli's Equation	Static, Stagnation and Dynamic Pressures
Energy Line and Hydraulic Grade Line	Restrictions on use of Bernoulli's Eqn.
Intro to Dimensional Analysis	Characteristics of Pipe Flow
Laminar Flow	Turbulent Flow
Minor Loses and the Moody Chart	