

# AME 516 – Convection Processes

## Spring 2012

TTh 3:30-4:50 OHE120

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Office Hours: Available by appointment immediately following class or by email.

**Grading:**

Homework:	20%
Midterm:	35%
Final:	45%

**Topics:**

1. Transport Processes
2. Governing equations for Heat, Momentum and Mass transfer
3. Internal Flows: Laminar Flow and Heat transfer in pipes
4. External Flows: Laminar flow, heat and mass transfer from surfaces, boundary layer methods.
5. Free Convection
6. Turbulence in pipes and boundary layers

Text: *Convective Heat Transfer* by L.C. Burmeister, Wiley Interscience, New York, 1993, ISBN 0-471-57709-X

**Notes:**

Midterm will follow the return of the homework assigned for Topic 3.

Final: Tuesday, May 14: 2-4:00pm

All examinations are open book and notes.

Some topics are handled differently from the book, you are responsible for everything done in class.

Homework is due one week after being assigned and must be submitted in class for on-campus students.

No late homework will be accepted.

### **Statement for Students with Disabilities**

Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me (or to TA) as early in the semester as possible. DSP is located in STU 301 and is open 8:30 a.m.–5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776.

### **Statement on Academic Integrity**

USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one's own academic work from misuse by others as well as to avoid using another's work as one's own. All students are expected to understand and abide by these principles. *Scampus*, the Student Guidebook, contains the Student Conduct Code in Section 11.00, while the recommended sanctions are located in Appendix A: <http://www.usc.edu/dept/publications/SCAMPUS/gov/>. Students will be referred to the Office of Student Judicial Affairs and Community Standards for further review, should there be any suspicion of academic dishonesty. The Review process can be found at: <http://www.usc.edu/student-affairs/SJACS/>.