Fall 2015

ENME 5754

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University of New Orleans

ENME 5721: Introduction to Gas Dynamics, Fall 2015

Instructor: Dr. Martin Guillot
Class Meeting Time: 6:00-7:15 pm, M,W
Location: Rm EN 321
Office: EN 924, Ph 280-6184
Email: mjguillo@uno.edu
Office Hours: 1:30-3:30 T,Th, or by appointment.

Text: Modern Compressible Flow with Historical Perspective, 3rd ed, John D. Anderson. McGraw Hill Education. ISBN: 978-0071241366 (hardcover), Also available in paperback.

Cell Phone Policy:

- Cell phones should be turned off during class and put away.
- No cell phones on your desk.
- If you forget to turn your cell phone off and it rings during class, turn it off as quickly as possible.

Attendance& Lateness Policy:

- Attendance is required and students are expected to attend class regularly. You should arrive a few minutes early, so that you will ready to begin at the start of class. .

- I expect students to arrive for class on time. Habitual lateness is disruptive and inconsiderate to me and to the other members in the class. I do not take attendance, but I do note who habitually arrives late. If I notice you arriving habitually arriving late, I will talk to you after class. If it continues, I will begin deducting ¼ point from your final grade every time you arrive late.

Exam Policy:

- No person will be allowed to leave the class during a test and return. If you leave the class for any reason during a test, you must turn in your test before you leave. Make sure you use the bathroom before a test.

Grade Distribution:

Homework: 25%
3 tests @ 25% each: 75%

Grade Scale:
100-90 A
89.9-80 B
79.9-70 C
69.9-60 D
< 60 F

This grade scale is firm. An 89.9 is a B, not an A, and so on. If you are shooting for a particular grade it is up to you to get it.

Academic Integrity

Academic integrity is fundamental to the process of learning and evaluating academic performance. Academic dishonesty will not be tolerated. Academic dishonesty includes, but is not limited to, the following: cheating, plagiarism, tampering with academic records and examinations, falsifying identity, and being an accessory to acts of academic dishonesty. Refer to the Student Code of Conduct for further information. The Code is available online at http://www.studentaffairs.uno.edu.

ACADEMIC HONESTY POLICY STATEMENT: There is **a ZERO TOLERANCE** for academic dishonesty in this class.

- Each student is expected to do his/her own work. This includes tests, projects and homework.
- Any homework solution copied from a solutions manual will receive a zero.
- All students are expected to know and follow the university policies on academic dishonesty as stated in the student handbook beginning on pg. 38. The university student handbook can be found at
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http://www.uno.edu/student-affairs-enrollment-management/documents/academic-dishonesty-policy-rev2014.pdf

Accommodations

It is University policy to provide, on a flexible and individualized basis, reasonable accommodations to students who have disabilities that may affect their ability to participate in course activities or to meet course requirements. Students with disabilities should contact the Office of Disability Services as well as their instructors to discuss their individual needs for accommodations. For more information, please go to http://www.ods.uno.edu.

Cases of academic dishonesty will be handled according to the procedures in the handbook.

Incoming Skills:

- Knowledge of thermodynamics, heat transfer and fluid mechanics principles learned in those courses.

Outcomes of Instruction:

After successfully completing this course each student will be able to:

1. Students will be able to apply the basic laws of thermodynamics and fluid mechanics where the flow is considered to be compressible.
2. Students will be able to carry out calculations of flow properties and flow behavior in various engineering apparatus such as gas pipelines, convergent-divergent nozzles, supersonic airfoils, based on compressible flow considerations

Lecture	Date	Topics Covered/Reading Assignments	HW #	Homework Problems	Due Date
1	8/19/15	Ch 1, Introduction			
2	8/24/15	Ch 2: Conservation laws			
3	8/26/15	Ch 2: Conservation Laws			
4	8/31/15	Ch 3: Intro			
5	9/2/15	Ch 3: Intro			
6	9/7/15	Labor Day Holiday			
7	9/9/15	Ch 3: Normal Shock			
8	9/14/15	Ch 3: Normal Shock			
9	9/16/15	Ch 3: Flow with heat Addition			
10	9/21/15	Ch 3: Flow with Heat addition			
11	9/23/15	**Quiz 1**			
12	9/28/15	Ch 3: Flow with Friction			
13	9/30/15	Ch3 Flow with Friction			
14	10/5/15	Ch 4: Oblique Shocks & Expansions			
15	10/7/15	Ch 4: Oblique Shocks & Expansions			
16	10/12/15	Ch 4: Oblique Shocks & Expansions			
17	10/14/15	Ch 4: Oblique Shocks & Expansions			
18	10/19/15	**Quiz 2**			
19	10/21/15	Ch 5: Quasi-1D flow			
20	10/26/15	Ch 5: Quasi-1D flow			
21	11/2/15	Ch 5: Quasi-1D flow			
22	11/4/15	Ch 5: Quasi-1D flow			
23	11/9/15	Ch 6: Differential Conservation Eqns			
24	11/11/15	Ch 6: Differential Conservation Eqns			
25	11/16/15	Ch 6: Differential Conservation Eqns			
26	11/18/15	CH 7: Unsteady Wave Motion			
27	11/23/15	CH 7: Unsteady Wave Motion			
28	11/25/15	CH 7: Unsteady Wave Motion			
29	11/30/15	**Quiz 3**			
30	12/2/15				

Important Dates:

9/23/15 Quiz 1
10/19/15 Quiz 2
11/29/15 Quiz 3