

ENAE 362

AEROSPACE INSTRUMENTATION AND EXPERIMENTATION - 2024

Instructors:

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TAs ; Alanso Johnson, Cameron Storey
TFs - Owen Barrett, Blaine Galella, Gregory Vanderham

The labs are in room 0123 of Bldg. 089

The pre-requisites for this course are MATH 246 and ENAE 283.

Grade distribution:

- Weekly lab reports: 85% of final grade
- Lecture assignments: 15% of final grade

Grading for this course will be based on the weekly lab reports and lecture assignments.
Grades will be assigned as follows: A range: 90 to 100% B range: 80 to 90%
C range: 70 to 80% D range: 60 to 70% F: below 60%

GENERAL NOTES ON ENAE 362

1.) Laboratory reports are generally due 1 week after you complete an experiment - unless otherwise noted. Lab reports are to be placed in the 362 lab box in the Aerospace Laboratory **at the start** of the lab session. The reports will be collected from the lab box at 15 minutes after the start of lab – **labs not in will be counted as late**. Do not leave lab reports in mail slots, under office doors, etc. - expecting that we will receive them. Late labs will be docked 10% for each day they are late. If you have a late lab that you wish to turn in over the weekend - you must make prior arrangements with the teaching assistants or the instructor.

Staple your lab reports together in the upper left hand corner - there are staplers in the lab.
The excuse: "My printer did not work" will not be accepted for a lab being late.

You are allowed to turn in 1 lab - 1 day late - one time and also up to 3 pages - 1 day late.

- 2) **You must prepare and write your own reports.** Any evidence of copying lab reports or any data will be treated as Academic Dishonesty.
- 3.) Laboratory reports must be completed in the neatest fashion possible. If your hand writing is poor - then print. Use drawing instruments (e.g. a ruler) to make drawings and sketches. A sloppy lab report will be docked points.
- 4.) If you have a problem with grading on quizzes or lab reports – talk to the teaching assistant first - then see the instructor if the problem has not been resolved. There is a two week “statute of limitations” on the “problems” with grading of labs and exams – i.e. you must bring a “problem” to the attention of the teaching assistant and/or instructor within two weeks after a lab or exam has been returned to you.
- 5.) Excuses for missing labs, quizzes and exams will be given only for the following reasons. **You must bring proof of your excuse. This is needed as soon as you return to campus and not simply when you return to this class.**
- a.) illness - bring a note from the U of MD Health Center or your doctor.
 - b.) some activity sanctioned by the University of Maryland - bring a note from your supervisor, coach, band leader, etc.
 - c.) scheduled court appearance – bring a photocopy of your summons
 - d.) tragedy in your family
 - e.) circumstances beyond the student's control
- Make-ups are required to be completed as soon as possible.** Any other problems with excused absences can be discussed with the instructor during his office hours.
- 6.) You are not allowed to switch back and forth from one lab group to another unless approved by the instructor. If you must switch from one group to another for some approved reason, you must complete the form **Permission to Switch Lab Groups** and have it signed by the instructor.
- 7) You must attend a complete lab session for any given experiment – failure to do so will result in a grade of 0 for that lab. Copying any data or results from someone else’s lab report will be considered Academic Dishonesty.
- 8.) No food, soft drinks or juice drinks are allowed in the laboratory. Drinking water is permitted. Smoking is not allowed anywhere in our labs. Be careful not to stack your books and coats on top of tables which may be in use by someone. **DO NOT listen to music , use your cell phone or do any texting during lab.**

- 9) Be sure to record the data in your worksheets in the neatest fashion possible. Remember - the worksheets are your final report on the lab. Sloppy work on the work sheets means lost points. **Work sheets must be turned in on single sided copies.**
- 10.) Do your labs in lead pencil - not ink pen. Lead pencil can easily be erased if you make a mistake.
- 11.) **All graphs and tables must be computer generated.** See the separate page entitled Format for Tables and Graphs for further details. Graphs and tables should be on single sided sheets - i.e. do not put anything on the back side of the sheet.
- 12.) When a graph or table is asked for in the worksheets, it should be placed on the very next page - unless otherwise specified.
- 13) If you have a documented disability be sure to bring in the forms from the ADS office for me to sign. **This must be done early in the semester.**
- 14.) Please inform the instructor if you will be absent due to a religious observance.
- 15.) In the event of a closure of the University for an extended period of time, the lab Schedule and exam schedule will be modified accordingly.
- 16.) Office hours for Dr. Winkelmann are: Tuesday and Thursday from 12 noon to 2 pm - or by appointment
If the lab is open, you can stop by anytime.
Aerospace Lab room 0123 of Bldg. 089
- 17.) For further details on University policy, go to : <http://www.ugst.umd.edu/courserelatedpolicies.html>

ENAE 362 LECTURES and LABS FOR FALL 2024

THE FOLLOWING TOPICS WILL BE COVERED:

- 1.) Basic DC Electronics
- 2.) Basic AC Electronics
- 3.) Semiconductor Devices
- 4.) Amplifiers
- 5.) Operational Amplifiers
- 6.) 555 IC
- 7.) Oscillators
- 8.) Electro-Optics
- 9.) Power Supplies
- 10.) Basic Digital Electronics
- 11.) Microcontrollers