Instructors
Prof. Thomas Cubaud  (2-9431)
Prof. F. P. Chiang   (2–8311)
Lab. Supervisor:    Mr. Ta-Yung Hsu (2-8307)

Preparation Lectures for Experiments: **Monday & Friday, 12:50 – 2:10 PM**

Jan. 30, Rm. 143 Eng. Bldg., All students.
*Topics:* Introduction, course overview, basics of writing lab reports.

Feb. 2, Rm. 143 Eng. Bldg., All students.
*Topics:* basics of measurement, significant digits

Feb. 6, Rm. 143 Eng. Bldg., All students.
*Topics:* error analysis and propagation

Feb. 9 & 13, Lectures specific to solid labs. Group 1 – 8.
Rm. 173 Light Eng. Bldg.
Lectures specific to fluid/thermal labs. Group 9 – 16.
Rm. 143 Eng. Bldg.

Rm. 143 Eng. Bldg.
Lectures specific to solid labs. Group 9 – 16
Rm. 173 Light Eng. Bldg.

Laboratory Location and Time: **Tuesday or Thursday, 1:30 – 4:30 PM.**

Fluid section: Rm. 101 Heavy Eng. Bldg.
Solid section: Rm. 101 (Lab 4.) Rm. 306 (Lab 1,2,3,5) Heavy Eng. Bldg.


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Lab switch fluid ⇔ solid: 1 week of lectures for Thermal/fluid part in Rm. 143 Eng.
Solid part in Rm. 173 Light Eng.

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(Spring break 4/5 – 4/11)

Note: schedule is tentative, and will be adjusted for holidays and other special functions accordingly.

**Grading Policy**

The final grade will be determined from:
Ten (10) lab reports: total 100 % (minimum of 2 reports per student as first author\(^1\))
Lab reports will be graded out of a maximum 100 points each.

**Lab Reports**

You must submit your previous lab report when you *arrive* at the lab for the next lab class.

**Penalty for Late Submission of Reports**

10 points (10%) deducted from final score for *each* day late. No exceptions will be made.

**T.A. Assignments**

T.A. Office hours = Lab. hours.

Solid part: Jiandong Yu

Fluid part: Yan Zhan

**Note:** Please Observe the TAs office hours. Like you, they are students, and have a busy schedule, with many tasks to manage. Please respect their schedules by only seeking assistance during their formal office hours.

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\(^1\) Students will form groups of *three* people to perform all labs. The group will collectively submit a single report. All lab partners will receive the same grade for the lab, however, regardless of the author. It is thus in the interest of the assisting lab partner(s) to insure the quality of the final report. In addition, two reports that you write as a *first author* (one from the *Solids* section, one from *Fluid/Thermal*) must be submitted to satisfy the MEC 300 writing requirements (details will be provided in class).
**Report Content**

1. Title Page (experiment title, *all* names, date due)
2. Abstract
3. Introduction
4. List of Equipment
5. Theory of Experiment (includes drawings and descriptions)
6. Experiment procedures
7. Results (includes calculation of experimental results; figures, graphs and tables must be labeled with a number and a caption; units with all numerical quantities must be included)
8. Discussion (trends in the results, comparison with theoretical predictions)
9. Error analysis
10. Conclusions
11. References (if you have them)
12. Appendices (You can place handwritten calculations, spreadsheet calculations, and other data)
13. Blue sheets from lab notebooks from *all* members

- Reports must be typed with a 12 pt font and double-spaced. Handwritten equations, calculations, and experiment drawings are OK. Graphs of data may be done by hand, but it is not recommended (it’s much easier to use a computer, e.g., Excel).

**Text Book**

A commercial textbook is not used for this course. Rather, we will provide you with two lab manuals, one for solids, and one for thermal/fluid systems, the cost of which is included in the lab fee. You will be given both manuals within the first two week of class. The beginning of the thermal/fluid lab manual has a section on effective report writing, error analysis, and other items to make life a bit easier when writing the lab reports. Additional books for reference are listed below.

**Reference Books**


All reference books above are reserved in the engineering library.
STONY BROOK UNIVERSITY SYLLABUS STATEMENT:
If you have a physical, psychological, medical, or learning disability that may impact your course
work, please contact Disability Support Services at (631) 632-6748 or
http://studentaffairs.stonybrook.edu/dss/.
They will determine with you what accommodations are necessary and appropriate. All
information and documentation is confidential.

Students who require assistance during emergency evacuation are encouraged to discuss their
needs with their professors and Disability Support Services. For procedures and information go to
the following website: http://www.sunysb.edu/ehs/fire/disabilities.shtml

STUDENT CONDUCT: Stony Brook University expects students to maintain standards of
personal integrity that are in harmony with the educational goals of the institution; to observe
national, state, and local laws and University regulations; and to respect the rights, privileges, and
property of other people. Faculty are required to report to the Office of Judicial Affairs any
disruptive behavior that interrupts their ability to teach, compromises the safety of the learning
environment, and/or inhibits students’ ability to learn.

STATEMENT ON ACADEMIC DISHONESTY
Academic dishonesty is an extremely serious offense and will not be tolerated in any form.
Academic dishonesty in general is the presentation of intellectual work that is not originally
yours. Examples include, but are not limited to, copying or plagiarizing class assignments
including homework, reports, designs, computer programs, and other submitted materials;
copying or otherwise communicating answers on exams with other students; bringing unapproved
aids, either in physical (written) or electronic form to an exam; obtaining copies of an exam prior
to its administration, etc. Academic dishonesty violates both the ethical and moral standards of
the Engineering profession and all infractions related to academic dishonesty will be prosecuted
to the fullest via the CEAS CASA committee. For you, the honest student, academic dishonesty
results in lower class curves, hence a depression in your GPA and class standing, while
cheapening the degree you earn.

CALCULATOR POLICY
Effective Fall 2008 only the following calculators will be permitted on all midterm and final
exams in the Department of Mechanical Engineering. There will be no exceptions! This list of
calculators is identical to that allowed for the National Council for Examiners for Engineering
and Surveying (NCEES) Fundamentals of Engineering (FE) exam that many of you will take in
your senior year, as well as the Professional Engineering (PE) exam that you may take several
years from now. The sooner you become comfortable on one of these calculators, the better.

NCEES Allowed calculators as of Fall 2008:

- **Casio**: All fx-115 models. Any Casio calculator must contain fx-115 in its model name.
- **Hewlett Packard**: The HP 33s and HP 35s models, but no others.
- **Texas Instruments**: All TI-30X and TI-36X models. Any Texas Instruments calculator must
  contain either TI-30X or TI-36X in its model name.

The NCEES policy on calculator can be found here:
http://www.ncees.org/exams/calculators/