

**Las Positas College
Vacuum Technology 60B
Spring 2003**

Instructors:

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Office Hours: By appointment only or at end of class

Required Materials:

- (1) *Modern Vacuum Practice*, Nigel Harris - LPC Bookstore
- (2) *Vacuum Technology, an Introductory Laboratory Course*, Biltoft & Benapfl

Other Items:

Scientific calculator, capable of exponents, natural logs
Pencil and Eraser (recommended for homework assignments)
Access to an Internet, Browser, Adobe Acrobat Reader, Printer
Microsoft Excel

Schedule: Lecture: Monday evenings 6:30 to 9:20 PM

Grading (Lecture):

Homework: 40%
Final exam 40%
Attendance 20% (maximum 4% per missed day)

Lecture Number	Date	Topic
	01/27	Class Cancelled
1	02/03	Residual Gas Analysis
2	02/10	Flow modes and mass transport, 60A exam review
	02/17	Presidents Day – No Class
3	02/24	Systems Design Pump speed curves, introduction to MS Excel
4	03/03	Systems Design: Conductance in circular tubes
5	03/10	Systems Design: Conductance in apertures, elbows, Surface Analysis
6	03/17	Systems Design: Delivered pump speed
7	03/24	Systems Design: Time to evacuate a vessel, choked flow
8	03/31	Systems Design: Gas loads (outgassing, permeation)
9	04/07	Application: Thin Film Deposition
	04/14	Spring Break – No Class
10	04/21	Field Trip to Semicore Equipment Corporation
11	04/28	System Design: Calculation Wrap-up
12	05/05	Application: Semiconductor Device Fabrication
13	05/12	Fabrication and Cleaning techniques
14	05/19	Review for final exam
15	05/26	Final Exam

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Additional Notes:

- Class starts promptly, and attendance will be taken at the beginning of each lecture. Material will be presented that are not in the textbooks.
- Instructor will regularly post overhead lecture notes, homework, and required reading at <http://lpc1.clpccd.cc.ca.us/lpc/tswain>
- It is recommended that the students download the notes approximately 4 hours before class.
- Homework will be distributed. Late homework submittals will only receive half-credit. There are no exceptions. Mission college students will be able to turn their homework into the technician onsite at Mission college. Written assignments must be legible and answers must be furnished on the homework page (or a copy thereof) unless indicated otherwise.
- Failure to attend the final exam may result in a letter grade of "F". The only valid excuses for missing these are illness related, and you must fax or email the instructor no later than the day of the absence. The instructor reserves the right to *not* offer a makeup quiz or exam.
- If you decide not to continue the class, please drop yourself through admissions. Do not ask the instructor to do this for you. *Be aware of drop/add deadlines.*
- LPC Students are eligible to purchase a Lab Card in the LPC Bookstore or Library for four dollars (\$4.00). A Lab Card is required for students to be permitted to use the LPC campus computers.
- Email is the best way to reach the instructor. Fax is second best. Campus Voice Mail is not recommended.
- *Students assume all responsibility for drop/add deadlines.* If you decide not to continue the class, please drop yourself through admissions. Do not ask the instructor to do this for you.
- Misbehavior or disruptive or immature behavior will not be tolerated. You will be asked to leave the class and meet with the instructor before being allowed to return.
- Cheating will result in a report to the Dean of Student Services, and disciplinary action.