This is the homepage for MAE29BA during Winter Quarter 2015. Last updated: March 25, 2015.

**Practical details**

Lectures: MWF 10-10:50 am, WLH 2112. My e-mail address is sgls@ucsd.edu, but if you have a question, talk to me before or after class, or come to office hours. Office hours: Tu 9-11 am. Problem class: Tuesdays 2-3:30, EBUII 305. **It is your responsibility to come and find me if you have questions, concerns, etc...**

**Textbook and Resources**

*Mathematical Methods for Physics and Engineering* by Riley, Hobson and Bence (2006, Cambridge University Press, 3rd edition, 1362 pages). It's probably worth buying. I have placed it on reserve at the library, including an electronic copy, as well as other books. Password for the library page: SL294b (let me know if there's a problem).

See the website for the MAE207 Applications of complex analysis I taught in 2008 [here](http://). There is some overlap.

**Syllabus**

1. Review of complex variable.
2. Conformal maps.
3. Contour integration.
4. Integral transforms.
5. Integral equations.
6. Shocks?

**Lecture Schedule (provisional)**

- **Jan 5:** I Complex variable
- Jan 7: (Cont.)
- Jan 9: (Cont.)
- **Jan 12:** Professor Saintillan (I am away) (Cont.)
- Jan 14: Professor Saintillan (I am away) (Cont.)
- Jan 16: Professor Saintillan (I am away) (Cont.)
- **Jan 19:** Martin Luther King holiday
- Jan 21: II Conformal maps  HW I due
- Jan 23: (Cont.)
- **Jan 26:** (Cont.)
Homework

Homework policy: you may discuss problems among yourselves, but everything you write and hand in should be your own work. Regrades: you should write a short explanation and turn it in to me within one week of the homework being due.

- I Due Jan 21. Solution.
- II Due Feb 4. Solution.
- III Due Feb 18. Solution.
- IV Due Mar 4. Solution.

Midterm

Feb 11, 50 minutes in class. Solution.

Suggestions about homework and the like (from 2005)

Final

Friday March 20: 8:00-10:59 am. Solution.

Grading policy

I remind you of UCSD's policy on academic integrity. I may rescale the three components (homework, midterm, presentation and project) separately to arrive at the final grade. See practical details.