

## Course information

**Web page:** <http://maecourses.ucsd.edu/ceng101b>

### Times

Lectures: MWF 11:00–11:50 am, Cognitive Sciences Building 004. Fourth hour: W 1:00–1:50 pm, Cognitive Sciences Building 004. Office hours: Tu 2:00–3:00 pm; e-mail: [sg1s@ucsd.edu](mailto:sg1s@ucsd.edu). TA: Jaemo Park, e-mail: [jaemopark@ucsd.edu](mailto:jaemopark@ucsd.edu). Office hours/problem class: W and Th 3:00–4:00 pm, EBUII 305.

### Text

*An Introduction to Heat and Mass Transfer* by Stanley Middleman, Wiley. I have placed a copy on reserve at the Science and Engineering Library.

### Homework

Homework will be assigned every week and should be turned in on Mondays (except for holidays) to the TA. Some presentation guidelines: print name clearly at top of page; box final answers, especially for problems with multiple (a, b & c) parts; label multiple parts of problems (a, b & c) clearly; list assumptions clearly. Solutions will be placed on the website after the due date. Requests for regrades must be submitted in writing to me within a week of getting the homework back, with a justification for the regrade. Include name, date, e-mail address.

### Quizzes

There will be five hourly quizzes every other Wednesday starting January 16. There will be no make-up quizzes. All exams are closed book. Bring pencil and calculator to all quizzes.

### Final

The final will be on Monday, March 17, 11:30 am–2:30 pm. A make-up exam will only be provided for medical reasons with proper documentation from a physician. It will cover the material lectured during the course and the material assigned as reading.

### Grading

Method A: Curve based on: Homework 10%, 4 best of 5 quizzes 40%, final 50%.  
Method B: Absolute scale based on final: A > 80%, B > 70%, C > 55%, D > 40%.

Your grade will be computed by methods A and B and you will receive the higher of the two. I may rescale the different components (homework, quizzes, final) separately to arrive at the final grade. I do not recommend planning on Method B from the beginning. Method A is more reliable.

## Cheating

I remind you of UCSD's policy on academic integrity. Action will be taken in cases of cheating. Don't make it happen to you.

## Stefan G. Llewellyn Smith

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### Research interests:

Fluid dynamics. Asymptotic methods.

### Interests:

Japanese; good food; rowing (OK); surfing (very bad).

### Education:

- Queens' College, University of Cambridge, 1993–Oct 1996. PhD 1996.
- Massachusetts Institute of Technology and Woods Hole Oceanographic Institution, 1992–1993.
- Queens' College, University of Cambridge, 1988–1992. Certificate of Advanced Study (Part III of the Mathematical Tripos) with Distinction, 1992. BA (Honours) First Class (Parts IA, IB & II), 1991.

### Some recent publications:

- Llewellyn Smith, S. G. & Tobias, S. M. 2004 Vortex dynamos. *J. Fluid Mech.*, 498, 1–21.
- Gille, S. T., Llewellyn Smith, S. G. & Statom, N. M. 2005 Global observations of the land breeze. *Geophys. Res. Lett.*, 32, L05605, doi:10.1029/2004GL022139.
- Conroy, D. T., Llewellyn Smith, S. G. & Caulfield, C. P. 2005 Evolution of a chemically reacting plume in a ventilated room. *J. Fluid Mech.*, 537, 221–253.
- Petrelis, F., Llewellyn Smith, S. G. & Young, W. R. 2006 Tidal conversion at a submarine ridge. *J. Phys. Oceanogr.*, 36, 1053–1071, doi: 10.1175/JPO2879.1.
- Di Lorenzo, E., Llewellyn Smith, S. G. & Young, W. R. 2006 Numerical and analytical estimates of  $M_2$  tidal conversion at steep oceanic ridges. *J. Phys. Oceanogr.*, 36, 1072–1084, doi: 10.1175/JPO2880.1.
- Adda-Bedia, M. & Llewellyn Smith, S. G. 2006 Supersonic and subsonic states of dynamic contact between elastic bodies. *Proc. R. Soc. Lond. A.*, 462, 2781–2795, doi:10.1098/rspa.2006.1709.
- Davis, A. M. J. & Llewellyn Smith, S. G. 2006 Perturbation of eigenvalues due to gaps in 2-D boundaries. *Proc. R. Soc. Lond. A.*, 463, 759–782, doi:10.1098/rspa.2006.1796.
- Urzay, J., Llewellyn Smith, S. G. & Glover, B. J. 2007 The elastohydrodynamic force on a sphere near a soft wall. *Phys. Fluids.*, 19, 103106.