

## MATH 231A: 8 LECTURE REFERENCES

### 1. BOUNDARY SCHAUDER ESTIMATES FOR THE LAPLACIAN

- Boundary estimates similar to what was done in class and in the posted notes are contained in Section 6.2.7 of [2].
- Boundary estimates, including weights that degenerate at the boundary in an appropriate way are given in Section 6.2 of Gilbarg-Trudinger [1]. Again, the method here is to use the fundamental solution in the form of the Green's function for the half-space  $\mathbb{R}_+^n = \{x \in \mathbb{R}^n \mid x^n > 0\}$ , and to carefully estimate the corresponding integrals.

### REFERENCES

- [1] Gilbarg, David; Trudinger, Neil S. **Elliptic partial differential equations of second order**. Reprint of the 1998 edition. Classics in Mathematics. Springer-Verlag, Berlin, 2001. xiv+517 pp.
- [2] Wu, Zhuoqun; Yin, Jingxue; Wang, Chunpeng **Elliptic & parabolic equations**. World Scientific Publishing Co. Pte. Ltd., Hackensack, NJ, 2006. xvi+408 pp.