Introduction to Partial Differential Equations   Instructor: Russell Brown

11-11:50am   Office: POT741

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and by appointment.

Homework 6. Due Wednesday, 7 November 2012.

Please remember that you are to attend 4 seminars or other events and hand in written summaries.

I would like to have recitation on Friday, 2 November.

1. Suppose that f is C^1 and compactly supported on the real line. Prove that the difference quotient

$$\Delta_h f(x) = \frac{f(x+h) - f(x)}{h}$$

converges uniformly to the derivative f' as $h \to 0$.

2. #18, Evans.

3. #21, Evans. It will be helpful to know a simpler expression for $\operatorname{curl} \operatorname{curl} u$.

4. #22, Evans.

5. #24, Evans.

October 31, 2012