

MATH 400

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Webpage: www.math.ubc.ca/~njb
(contains a link to course page)

Short summaries of the lectures will be posted here.

Assessment: by coursework & a final exam
There may be a midterm.

Office hours to be determined. *for discussion once the dust settles.*

Suggested textbook: R. Haberman
"Applied PDEs"
(available online)

- Course outline:
- * separation of variables
 - * Fourier/Laplace transforms
 - * Method of characteristics

The essential problem:

* To find a function: $u(x,t)$ or $u(x,y,t)$
or $u(x,y)$ etc.

* Differential Equation: $F(u, u_x, u_t, \dots; x, t) = 0$

$$u_x \equiv \frac{\partial u}{\partial x}, \quad u_t \equiv \frac{\partial u}{\partial t} \text{ etc.}$$

* BCs / ICs.

Organization:

no. of derivs on most differentiated term, for each indep. var.

Order, dimension, domain,

no. of independ. variables / coords

linear vs nonlinear

region of space/time

linear vs nonlinear

F linear or nonlinear in u, u_x, u_t etc