

Hunter College of The City University of New York

MATH 154 Introduction to Symbolic Computation 2 hrs, 1 cr

Textbook: The Student's Introduction to *Mathematica*, 2nd ed. by B. Torrence and E. Torrence, Cambridge University Press, ISBN 978-0-521-71789-2, paperback

Generalities

This is a completely online course. Office hours are by appointment. The course will be conducted through a blackboard site which can be reached through portal.cuny.edu. Your login name is your Hunter e-mail name, and your password is your Hunter e-mail password.

A copy of *Mathematica* for at home use can be gotten from the Dolciani Mathematics Learning Center the first week of class. The disks come with installation instructions which must be followed exactly.

Submission of assignments: How to submit assignments is discussed in the course document Submission of Work. Please follow these instructions exactly.

Topics

- 1: *Mathematica* generalities; *Mathematica*'s help system; *Mathematica* as a scientific calculator and algebra calculator; *Mathematica* as a scientific word processor
- 2: Setting variables, defining functions, solving equations
- 3: More equation solving, inequality solving
- 4: Graphing
- 5: More graphing
- 6: Calculus and *Mathematica*
- 7: Implicit differentiation
- 8: Structure of *Mathematica* graphics; Introduction to programming
- 9: Introduction to functional programming