Scientific Programming in Atmospheric Science
MSC 321

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Grades  30% Homework (involve programming)
        40% 2-Mid term
        30% Term project or Final

Syllabus

• Introduction to scientific computing

• Programming with Fortran
  – Variables, Expressions and Assignment statements
  – Program Flow Control
    * Conditional statements
    * Loops
  – Subroutines
  – Arrays
  – I/O
  – Modules

• Numerical Methods
  – Numerical integration
  – Taylor series
  – Finite Difference Methods
  – Finite Volume Methods
  – Vortex Methods

• Parallel Programming