TABLE OF CONTENTS

necessed 1. Accempts to relate the navier-Stokes equa-	,
tions to turbulence, by J.E. Marsden	
Appendix to Lecture I: Bifurcations, semiflows, and	23
Navier-Stokes equations, by T.S. Ratiu	
Lecture II: Theories of turbulence, by A.J. Chorin	36
Lecture III: Dynamical systems and turbulence, by	48
S. Smale	
Lecture IV: A phenomenological theory for the compu-	71
tation of turbulent shear flows, by P.G. Saffman	
Lecture V: Fractals and turbulence: attractors and	83
dispersion, by B.B. Mandelbrot	
Lecture VII: The structure of Lorenz attractors, by	94
R.F. Williams	
Appendix to Lecture VII: Computer pictures of the	113
Lorenz attractor, by O.E. Lanford	
Lecture VIII: A model for Couette flow data, by	117
R. Bowen	
Appendix: Two attempts at modeling two-dimensional	135
turbulence, by H.M. Glaz	