SERVIÇO PÚBLICO FEDERAL
UNIVERSIDADE FEDERAL DE PERNAMBUCO
DEPARTAMENTO DE ENGENHARIA MECÂNICA
Pós-Graduação em Engenharia Mecânica UFPE
Área: Sistemas e Processos Térmicos (linha pesquisa Energia Eólica)

Disciplina:
PEM: 995 Tópicos Especiais em Energia V - (Air Pressure and Winds of Small Scale)

Prof. Proponente/Responsável: Prof. Dr. Alex Maurício Araújo

Objetivos / contexto:
In this course, we will first consider how and why atmospheric pressure varies and then we will look at the forces that influence atmospheric motions aloft and at the surface. Through studying these forces, we will be able to tell how the wind should blow in a particular region by examining surface and upper-air charts. We will examine a variety of eddy circulations. First, we will see how eddies form and how eddies and other small-scale winds interact with our environment. Then, we will examine slightly larger circulations — local winds systems.

Ementa:
1- Surface and upper-level charts; 2- Forces that influence the winds; 3- Estimating wind direction and pressure; 4- Winds on upper-level charts; 5- Surface winds; 6- Scales of motion; 7- Friction and turbulence in the boundary layer; 8- Eddies — big and small; 9- Local wind systems; 10- Other local winds of interest.

Bibliografia Básica:
Grotjahn, Richard. Global Atmospheric Circulations: Observations and Theories, Oxford University Press, Oxford, England, 1993.
Karoly, David J., and Dayton G. Vincent, Eds. Meteorology of the Southern Hemisphere, American Meteorological Society, Boston, MA, 1998.
Stull, Roland B. Meteorology Today for Scientists and Engineers (2nd Ed.), Brooks/Cole Publishing Co., Pacific Grove, CA, 2000.
Cotton, W. R., and R. A. Anthes. Storm and Cloud Dynamics, Academic Press, New York, 1989.
Glossary of Meteorology. Todd S. Glickman, Managing Ed., Am. Meteorological Society, Boston, MA, 2000.

Mecanismo de Avaliação:
Verificação da participação nas aulas; colaboração efetiva na construção do produto do Curso.

Horário: Quinta-feira-16:00h-19:00h / Vagas: 10 (dez).

Local: Sala de aulas do Lab. Fluidos.

Recife - maio - 2017.