Miami Dade College

Course Description

MET1010| Introduction to Weather | 3.00 credits

An introduction to fundamentals of weather and their impact on human activities. Topics include temperature, humidity, clouds, precipitation, air masses, fronts, and storms. Emphasis is on understanding how these processes take place and their results. Pre/corequisite: PSC1515, MET1010L, Optional laboratory

Course Competencies

Competency 1: The student will demonstrate competence in understanding weather-related phenomena and their impact on human activities by:

1. Examining the relationship between temperature and human comfort levels, and evaluating the effects of temperature variations on daily activities and productivity
2. Interpreting the significance of humidity levels in relation to human health and well-being, and assessing the impact of high humidity on various industries such as agriculture and tourism
3. Predicting cloud formations based on weather conditions, and forecasting the potential impact of different cloud types on outdoor activities and transportation systems

Competency 2: The student will demonstrate competence in recognizing and evaluating different types of precipitation and their effects on human activities by:

1. Comparing the characteristics of rain, snow, sleet, and hail, and evaluating their respective impacts on transportation, infrastructure, and daily routines
2. Assessing the influence of precipitation patterns on agriculture, water resources, and urban planning, and predicting the potential consequences of droughts or heavy rainfall on these sectors
3. Identifying the role of precipitation in the formation of natural disasters such as floods and landslides and analyzing the impact of these events on human settlements and emergency response systems

Competency 3: The student will demonstrate competence in understanding the formation and behavior of air masses, fronts, and storms, and their effects on human activities by:

1. Explaining the characteristics of different air masses and their origins and analyzing how the movement and interaction of these air masses lead to changes in weather conditions and climatic patterns
2. Recognizing the types of weather fronts (e.g., cold front, warm front, occluded front) and their associated weather phenomena, and evaluating their impact on aviation, maritime activities, and outdoor events
3. Investigating the life cycle and behavior of storms such as thunderstorms, tornadoes, and hurricanes, and assessing the risks and safety measures associated with these severe weather events in different regions

General Education Learning Outcomes:

- Use quantitative analytical skills to evaluate and process numerical data
- Solve problems using critical and creative thinking and scientific reasoning
- Describe how natural systems function and recognize the impact of humans on the environment