

# **Assignment 1: Climate Change Analysis**

## **Instructions**

Analyze climate change data and evaluate impacts on ecosystems.

### **Part 1: Data Analysis (30 points)**

Using provided climate data: 1. Create graphs showing temperature trends 2. Create graphs showing precipitation trends 3. Calculate rates of change 4. Identify significant patterns 5. Compare to historical averages

### **Part 2: Impact Assessment (25 points)**

Choose a specific ecosystem and analyze: - How climate change affects it - Observed changes - Predicted future impacts - Vulnerable species or processes - Adaptation capacity

### **Part 3: Mitigation Strategies (25 points)**

Develop mitigation strategies: - Specific actions to reduce emissions - Feasibility assessment - Expected effectiveness - Implementation challenges - Cost-benefit analysis

### **Part 4: Adaptation Plan (20 points)**

Create an adaptation plan: - Priority actions - Timeline - Resource needs - Success metrics - Monitoring plan

## **Format**

- 5-7 pages
- Include graphs and data tables
- Use scientific format
- Cite all sources

## **Submission**

Submit via Canvas with all supporting data and graphs.