# Environmental Monitoring & Climate Change Laboratory

## Aim:

The aim for the establishment of the Laboratory is to promote and improve research activities in AASTMT and help to conduct consultancies as part of extension services to the industries. The lab specializes to carry out the following activities and studies:

1. Environmental impact assessments,
2. Water quality analysis,
3. Wastewater analysis,
4. Meteorological and climate data collection,
5. Analyzing the environmental factors in it to detect chemical components and pollution, in order to ensure compliance with agreed environmental conditions and standards.
6. The laboratory would provide community training in environmental monitoring and associated services.

## Objectives:

1. Provide laboratory environment measurements within health facilities and Industries.
2. Provide measurements of the laboratory environment within factories and industrial cities.
3. Provide measurements of the laboratory environment within the administrative buildings and commercial and educational projects.

## Lab Advantages:

1. Established according to the highest standards and analytical techniques adopted.
2. Integrated laboratory covering the entire spectrum of environmental and climate analyzes.
3. Managed and operated by a trained and highly qualified staff.

## Laboratory Equipment:

| | Company | Equipment Name | Parameters |
|---|---|---|---|
| 1 | Xylem | YSI 9300 Photometer | Portable, Waterproof Water Quality – Chemical Properties |
| 2 | Xylem | PH100A - | Portable pH, mV and Temperature |
| 3 | Xylem | EC300A – YSI 300-4 EC Probe | Portable Conductivity, Salinity and Temperature |
| 4 | Xylem | DO200A – YSI 200-4 DO Probe | Field/Lab Dissolved Oxygen and Temperature |
| 5 | Aeroqual | Aeroqual Series 500 | Portable Air Quality Monitor |
| | | | Carbon dioxide (CO2): 0 - 5000 ppm |
| | | | Chlorine (Cl2): 0 - 10 ppm |
| | | | Carbon Monoxide (CO): 0-25 ppm |
| | | | Hydrogen Sulfide (H2S): 0-10 ppm |
| | | | Ammonia (NH3): 0 - 100 ppm |
| | | | Nitrogen Oxides: 0-0.5 ppm |
| | | | Sulphur dioxide (SO2): 0-10 ppm |
| | | | Ozone (O3): 0-0.15 ppm |
| | | | Volatile Organic Compounds (VOCs): 0-20 ppm |
| | | | Dust: laser particle counter PM2.5 / PM10 |
| 6 | Casella | CEL-24X | Sound Level Meter |
| 7 | Elsec | 765C UV+ Logger | Lux Meter (UV & Infrared), Relative Humidity, Air Temperature |

| | | | |
|---|---|---|---|
| 8 | Dell | 20 High Performance PC's | |
| | | | |

| **Software** | | | |
|---|---|---|---|
| | **Company** | **Equipment Name** | **Parameters** |
| **1** | Lakes Environment | AERMOD View | Gaussian Plume Air Dispersion Model |
| 2 | CLIMsystems Limited | SimCLIM Desktop 4.0 | AR5 dataset with 40 GCM and available RCM/cordex tata at 1*1 km resolution. Monthly averages of: Precipitation (mm), Mean Temperature (°C), Minimum Temperature (°C), Maximum Temperature (°C) for EGYPT country wide. |
| 3 | | SimCLIM for ArcGIS Climate and Marine | |
| 4 | | EGYPT country wide Additional Data sets | Solar (W/m2); Relative humidity (%); Wind speed (m/s) |


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EcoSense EC300A
EcoSense pH100A


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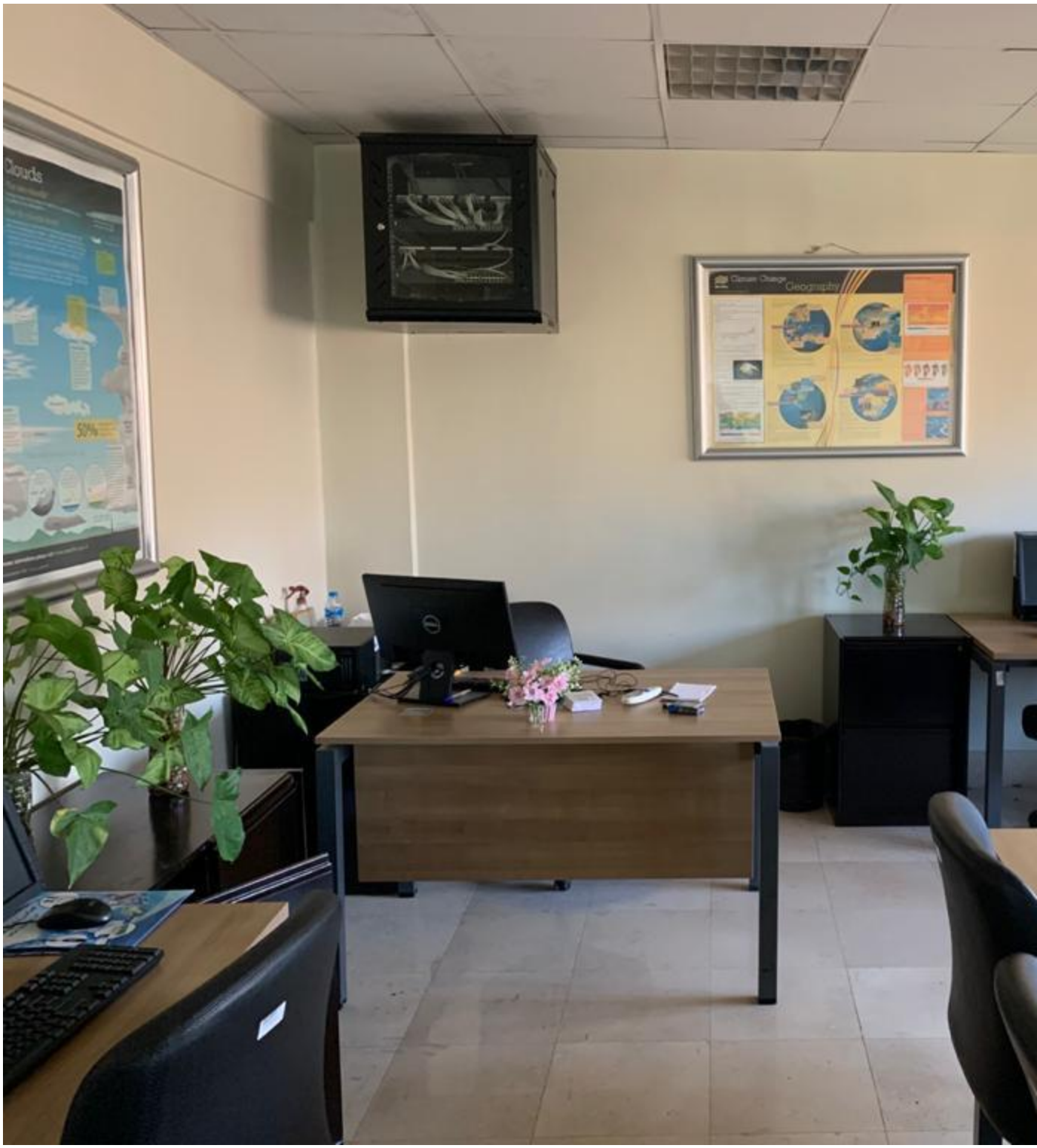
Clouds
50%
Geography


Climate Change
Geographic
Climate Change
Science


Satellites, weather and climate
There are two types of satellite orbit
For more information please visit