



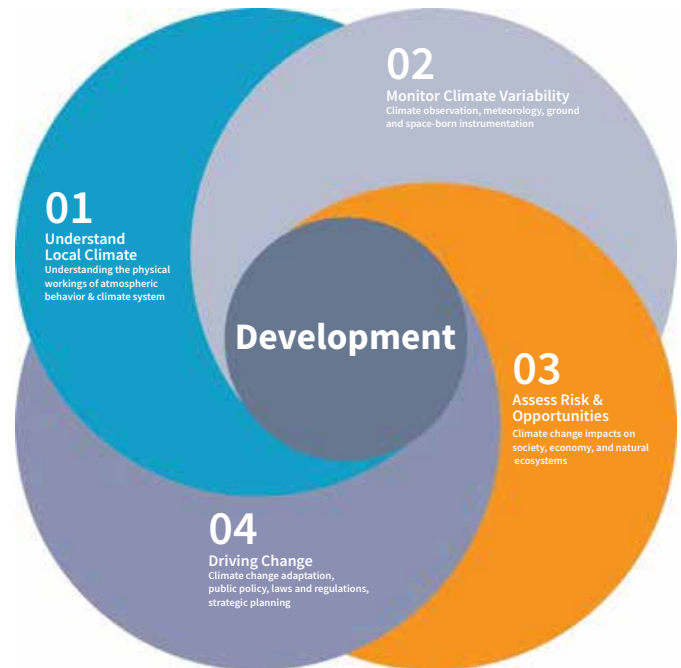
E-JUST

**Professional
Postgraduate
Diploma**

**Climate Change
Monitoring and
Management**

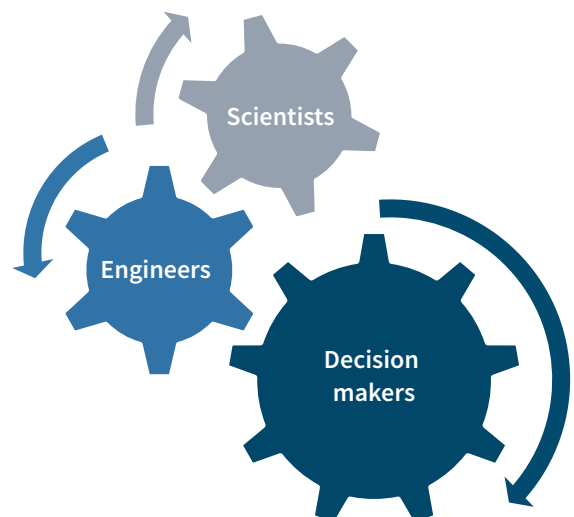
Objective

The importance is recognized of the need for an interdisciplinary approach to challenges inherent in global climatic changes. It is essential that scientists, engineers and future environmental decision-makers understand the fundamental causes and impacts of climate change and the potential mitigation and adaptation measures required to respond to the challenge. Scientists and engineers should be encouraged to adopt an understanding of the wider environmental, socio-economic and political aspects of climate change. This Diploma degree has a distinctive modular structure providing sufficient flexibility to meet the wide variations in background of entrants - and their respective individual career plans



Target Audience

- Science and Engineering Graduates from related fields
- Government officials and workers in national ministries and local authorities
- Environmental managers and workers in the private sector and non-governmental organizations
- Interested citizens



Admission Requirements

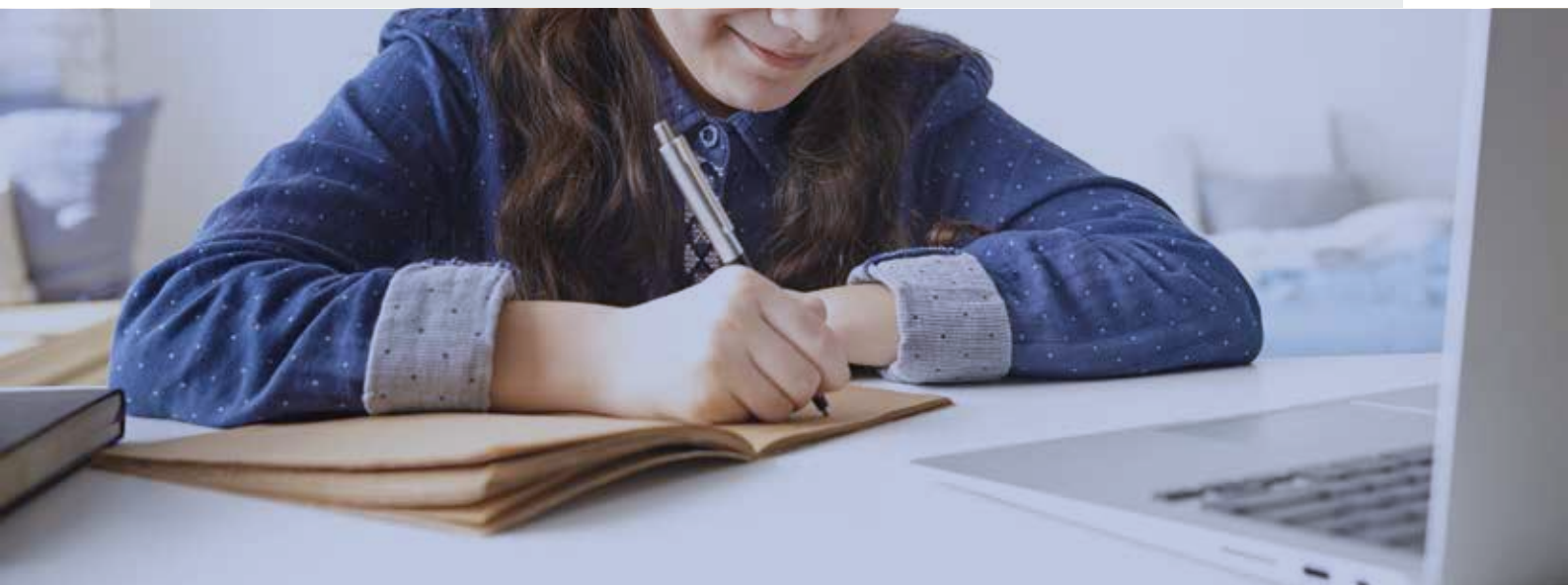
A suitable candidate for admission into this program should :

- Have a bachelor degree in a related field of specialization or relevant work experience
- Be familiar with math, statistics and quantitative methods
- Show adequate English level in interview

Degree Requirements

Diploma students must complete at least 24 credit hours, within the following guidelines

- Course-work of 18 credit hours, including
 - Three core courses of 9 credit hours
 - Three elective courses of 9 credit hours
- Pilot Project of 6 credit hours



Program Structure

The program is divided into two tracks with common core courses and different elective courses as defined by the student's academic advisor. The two tracks are as follows :

Track (I): Climate Change Monitoring

This track is concerned with the monitoring of our climate to understand recent changes and forecast future dynamics of the climate system. University-level mathematical skills is assumed for this track due to the advanced nature of the work, building on this foundation, a unique combination of specialized theoretical knowledge and practical training will be added

Learning Outcomes

- Advanced scientific foundation of Earth and atmospheric sciences
- Knowledge of meteorology and remote sensing basics
- Hands-on experience of data handling using computational tools
- Knowledge transfer among learners, exploiting the interdisciplinary environment
- Conducting an independent project, under the guidance of an advisor and in accordance with conventional norms for research ethics



Track (II): Climate Change Management

This track examines the human-environment interactions, with emphasis on regulations, economics, planning techniques and sustainability strategies. An interdisciplinary approach exploring action plans to combat climate change and its impacts. Students will be encouraged to develop a critical way of thinking towards results and underlying assumptions

Learning Outcomes

- Understanding main physical components of Earth's climate system
- Advanced knowledge of how climate change affects societies, economy, and natural ecosystems
- Knowledge of national climate-related policies, laws and regulations
- Acquiring managerial tools to develop strategies for adapting to climate change
- Conducting an independent project, under the guidance of an advisor and in accordance with conventional norms for research ethics



Core Courses

All the following three core courses are mandatory. Each course is worth 3 credit hours

Course Code	Course Title	Credits	Lecture	Tutorial	Lab	Contact Hrs.	Exam Hrs.
501 CCD	Introduction to Climate Change	3	2	-	2	3	3
502 CCD	Climate Change Risk Management	3	2	2	-	3	3
503 CCD	Principles of Global Climate System	3	2	-	2	3	3

Elective Courses

credit hours each). Students can also select; with 3) credit hours 9 courses of 3 Students should select the aid of their academic advisors; elective courses from other science or engineering disciplines

The list of elective courses for Track (I): Climate Change Monitoring, as follows

Course Code	Course Title	Credits	Lecture	Tutorial	Lab	Contact Hrs.	Exam Hrs.
CCD 504	Meteorological Remote Sensing Instrumentation	3	2	2	-	3	3
CCD 505	Space Weather and Climate Variability	3	2	2	-	3	3
CCD 506	GNSS Remote Sensing	3	2	2	-	3	3
CCD 507	GIS in Meteorology and Climate Science	3	2	-	2	3	3
CCD 508	Urban Microclimate Simulation	3	2	2	-	3	3
CCD 509	Fundamentals of air quality and pollution	3	2	2	-	3	3
CCD 510	Sustainable cities and climate change	3	2	2	-	3	3
ENV 507	Air Pollution and Control technology	3	2	-	2	3	3
EMA507	Solar, Wind and Biomass Energy	3	2	-	2	3	3
ENV 510	Global Environment	3	2	2	-	3	3
CSE 512	Machine Learning	3	2	-	2	3	3
ECE 513	Digital Image Processing	3	2	-	2	3	3

The list of elective courses for **Track (II): Climate Change Management**, as follows

Course Code	Course Title	Credits	Lecture	Tutorial	Lab	Contact Hrs.	Exam Hrs.
ACM502	Numerical Analysis	3	2	2	-	3	3
ACM507	Scientific Computing	3	2	2	-	3	3
CCD 508	Urban Microclimate Simulation	3	2	2	-	3	3
CCD 509	Fundamentals of air quality and pollution	3	2	2	-	3	3
CCD 510	Sustainable cities and climate change	3	2	2	-	3	3
CCD 511	Climate Economics and Policy	3	2	2	-	3	3
CCD 512	Climate Change Biology	3	2	2	-	3	3
ENV 510	Global Environment	3	2	2	-	3	3
CSE 512	Machine Learning	3	2	-	2	3	3
ECE 513	Digital Image Processing	3	2	-	2	3	3

Pilot Project

The pilot project period should include a short training at different Labs in E-JUST. The labs will be decided by the academic advisor to be related to the proposed student's project. The diploma students have to participate in a teamwork project, which is based on self-learning. Students have to present innovative concepts and competitive solutions

CCD 513- Pilot Project (6 Credits)



Program and Course Fees

Category	Fees	Note
Full Diploma Program (total 24 Cr hours – two semesters)	2,000 US\$	For Egyptian Students
Full Diploma Program (total 24 Cr hours – two semesters)	4,000 US\$	For Non-Egyptian Students



Thank You

For more Information

Please email the Industrial Training Unit (ITU) :
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