

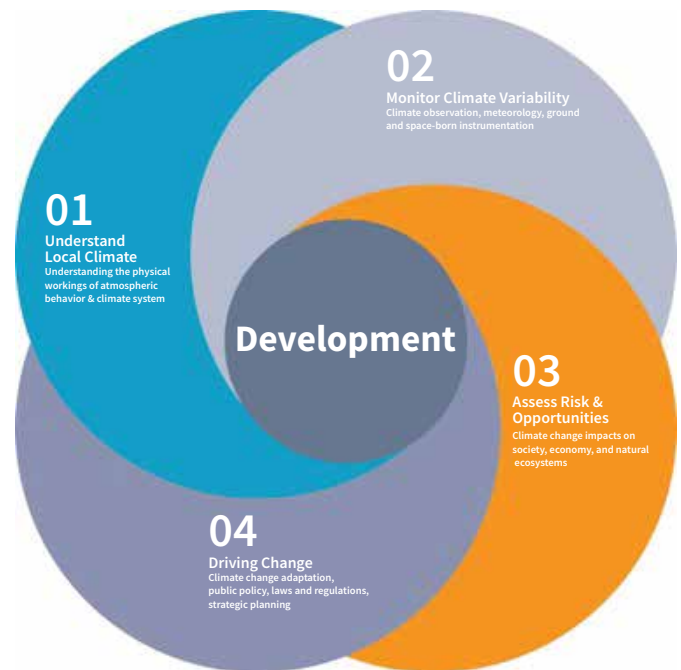


**Professional  
Postgraduate  
Diploma**

**Climate Change  
Monitoring and  
Management**

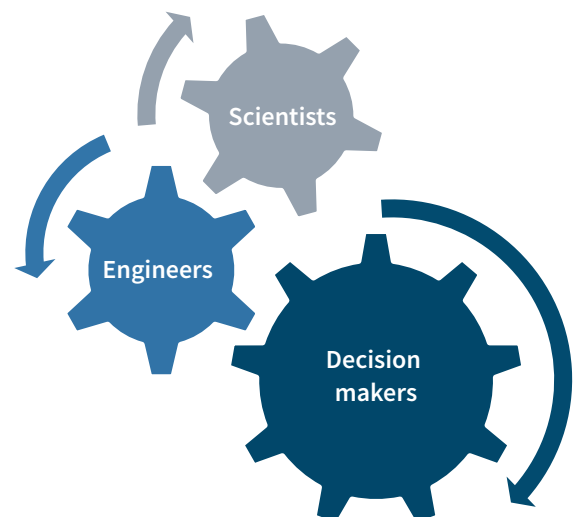
# Objective

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



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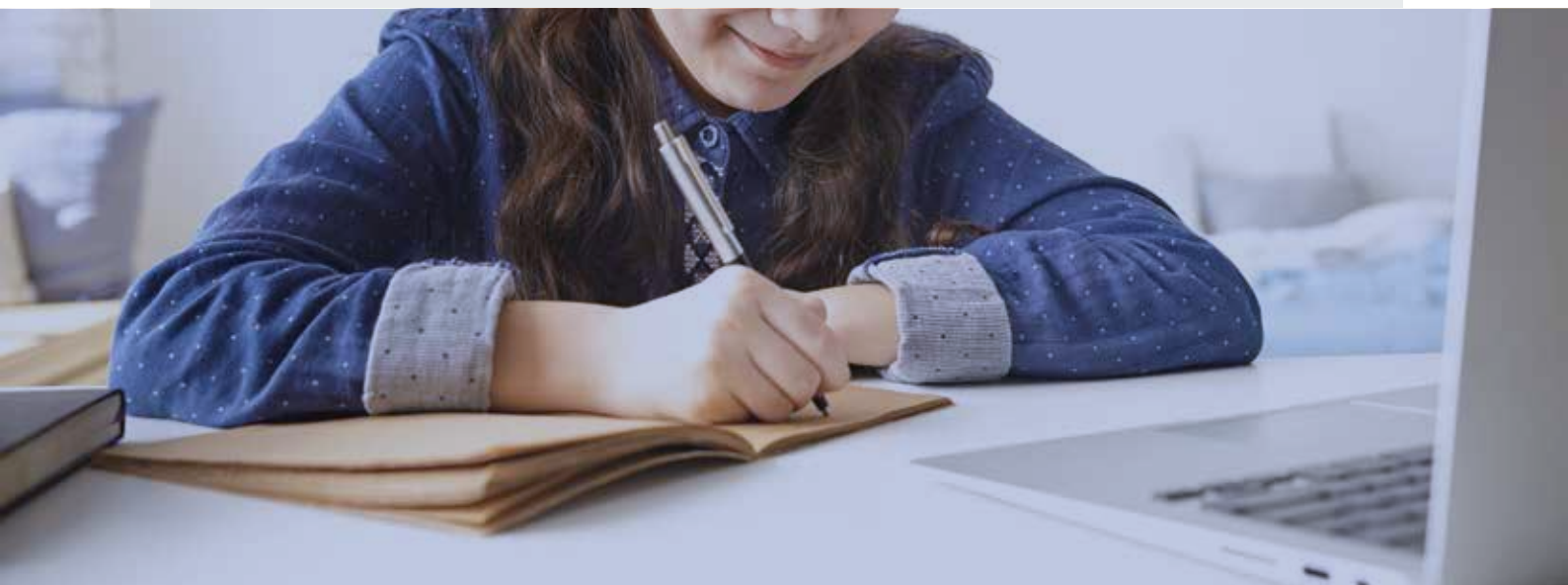
# Admission Requirements

1. Graduates with a bachelor's degree from Science and Engineering faculties.
2. International applicants should show adequate English level during 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)	32,000 EGP	For Egyptian Students
Full Diploma Program (total 24 Cr hours – two semesters)	4,000 US\$	For Non-Egyptian Students

## About E-JUST

Egypt-Japan University of Science and Technology (E-JUST) is a research-oriented university with the determination to improve the academic environment and become a benchmark for Egyptian and African countries in higher education. The university was established in May of 2009 based on a bilateral agreement between the Egyptian and Japanese governments. In 2010, it accepted the first batch of graduate students and started the excellence journey.

In September 2017, E-JUST reached another milestone when it inaugurated the Faculty of International Business and Humanities (FIBH). It was also in that year that the university began accepting high school students in both the Faculty of Engineering and the Faculty of International Business.

The partnership between both governments is extremely strong to ensure the ease of the educational journey of students. The Japan International Cooperation Agency (JICA) fully supports E-JUST by sending their experts to assist and guide in the technical transfer and management of the university. JICA also sends academic experts from the Japanese Cooperating Universities (JCU) to support in teaching, joint research and co-supervising the graduate students. In addition, JICA provides state-of-the-art equipment and tools for educational and research purposes. As for the Egyptian government, it fully supports the university's needs from capital to operating expenses.

All decisions that govern the university are done through its Board of Trustees (BoT) members, which is comprised of 20 prominent figures from Egypt and Japan. The Egyptian side includes a representative of the Ministry of Foreign Affairs, a representative of the Ministry of International Cooperation, and a representative of the Ministry of Higher Education. Whereas the Japanese side includes the Senior Vice President of JICA, a representative of the Ministry of Education, Culture, Sports, Science and Technology, and a representative of the Ministry of Foreign Affairs, and the presidents of five leading Japanese universities.





# Thank You

## For more Information

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