

STREAM 1 : TECHNOLOGY INNOVATIONS

22 January – 2 Feb 2026



# COMMTECH CAMP INSIGHT

# 2026

INSTITUT TEKNOLOGI SEPULUH NOPEMBER

(ITS) GLOBAL ENGAGEMENT

ITS Global Kampong, ITS, Sukolilo, Surabaya

BY JITTINUN SAENPOOWA D6700447

# ITS TOUR



## RESEARCH & INNOVATION GALLERY

The Research & Innovation Gallery at Sepuluh Nopember Institute of Technology (ITS) in Surabaya is a dedicated exhibition space that showcases the university's leading research outputs, technological developments, and innovative prototypes. Located within the ITS research complex, the gallery serves as a platform to present the achievements of students, lecturers, and researchers across various engineering, science, and technology disciplines. It functions not only as a display area for cutting-edge inventions and applied research but also as an educational and outreach facility for visitors, industry partners, and the wider community.



## ITS LAB @ DEPARTMENT OF ENVIRONMENTAL ENGINEERING



The Department of Environmental Engineering at Sepuluh Nopember Institute of Technology (ITS) in Surabaya is supported by several laboratories that focus on environmental research and practical training. These include laboratories for water and wastewater treatment, air pollution control, solid and hazardous waste management, and environmental quality analysis. The laboratories provide facilities for students and researchers to conduct experiments, analyze environmental samples, and develop solutions for environmental protection and sustainable resource management.

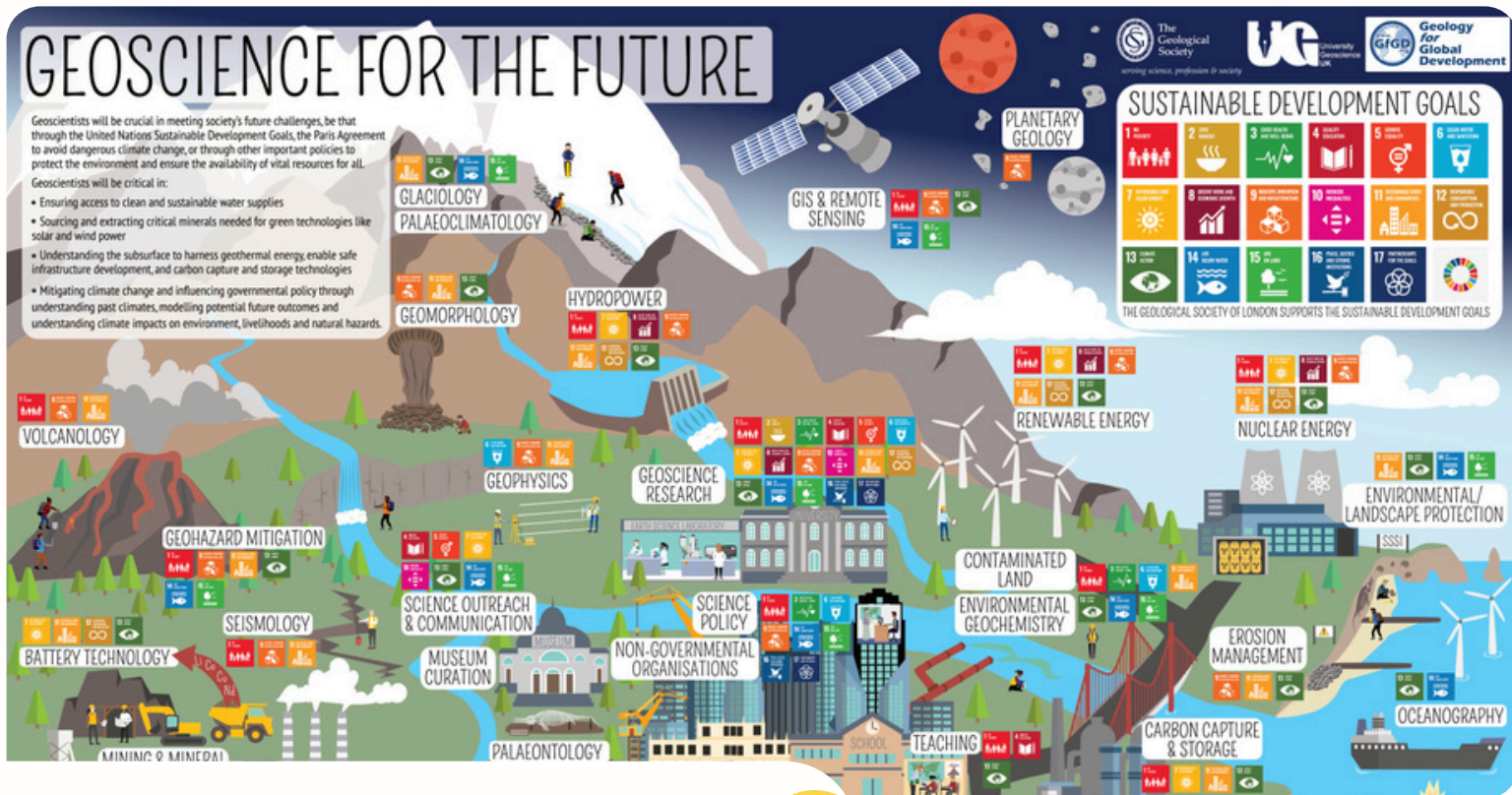


# LEARNING TOOLS

# A. COURSE

## GENERAL COURSE :

## TECHNOLOGY FOR SOCIETY BY ITS RESEARCH CENTER



# INTRODUCTION TO ENGINEERING GEOPHYSICS

Maryadi, S.Si., M.Eng., Ph.D.



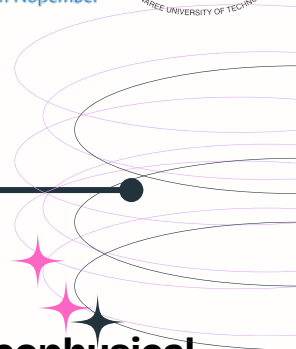
Engineering Geophysics is a discipline that combines geology, physics, and mathematics to investigate and model the Earth's subsurface using physical phenomena such as seismic waves, gravity, magnetism, and electromagnetism. By measuring contrasts in rock properties—such as density, wave velocity, resistivity, and magnetic susceptibility—geophysicists detect anomalies to interpret underground structures. These methods are widely applied in natural resource exploration, geohazard mitigation, environmental studies, geotechnical engineering, and archaeology.





# LEARNING TOOLS

## A COURSE



### Course 1:

## Disaster Management & Geophysical Innovation

Research and technological development related to disaster risk reduction and geophysical monitoring. The laboratory studies natural hazards such as earthquakes, landslides, and volcanic activities using geophysical methods and advanced monitoring technologies. It supports research, education, and collaboration aimed at improving disaster preparedness, early warning systems, and sustainable risk management.

### Course 2:

## Technology Innovation in Geodetic & Spatial Planning

Focuses on the development and application of geodetic technology and spatial planning methods. The laboratory conducts research related to geographic information systems (GIS), remote sensing, surveying, and spatial data analysis to support urban planning, infrastructure development, and sustainable land management. It also provides facilities for students and researchers to analyze spatial data and develop innovative solutions for spatial planning and environmental management.



### Course 3:

## Technology Innovation in Infrastructure Building

The Technology Innovation in Infrastructure and Building Laboratory at Sepuluh Nopember Institute of Technology (ITS) in Surabaya focuses on research and development related to construction technology, building materials, and sustainable infrastructure. The laboratory supports studies on structural performance, innovative construction methods, and durable materials for buildings and infrastructure. It provides facilities for testing materials, evaluating structural behavior, and developing technologies that improve the safety, efficiency, and sustainability of modern infrastructure.





# LEARNING TOOLS

## B. SITE VISIT



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### Site Visit to National Hydrodynamics Lab

The National Hydrodynamics Laboratory at Sepuluh Nopember Institute of Technology (ITS) in Surabaya is a major research facility dedicated to studying fluid dynamics related to marine and coastal engineering. The laboratory supports research on ship hydrodynamics, offshore structures, wave mechanics, and ocean engineering. Equipped with advanced experimental facilities, it enables researchers and students to analyze water flow, ship performance, and maritime infrastructure to improve the safety and efficiency of marine transportation and coastal development.



### Site Visit to Surabaya Intelligent Transport System

The Surabaya Intelligent Transport System (ITS) is a smart transportation management system developed in Surabaya with the support of Sepuluh Nopember Institute of Technology (ITS). The system uses advanced technologies such as traffic sensors, cameras, and real-time data analysis to monitor and manage urban traffic. Its main goal is to improve traffic efficiency, reduce congestion, enhance road safety, and support smarter urban mobility in Surabaya.





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# City Tour

De Javasche Bank Museum



Heroes Monument

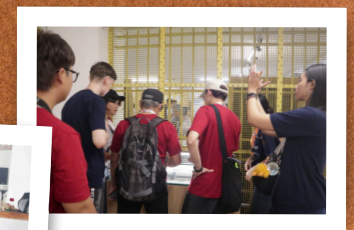


Shopping at Mirata Batik





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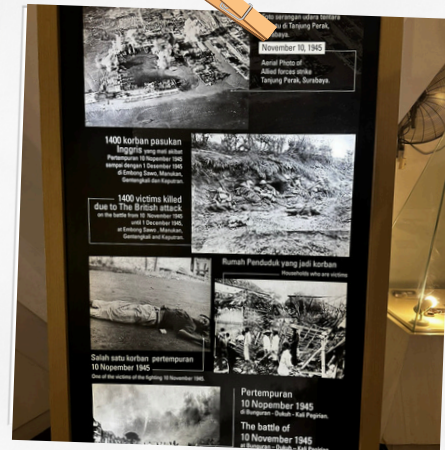


# De Javasche Bank Museum

Bank Indonesia Museum (formerly the building of De Javasche Bank) is a historical museum located in Jakarta's Old Town. De Javasche Bank was established in 1828 as the central bank of the Dutch East Indies, responsible for issuing currency and managing financial policy during the colonial period. After Indonesia gained independence, it became Bank Indonesia, and the original building was later restored and reopened as a museum in 2009. Today, the museum showcases the history of banking, currency, and economic development in Indonesia through exhibits of old coins, banknotes, archival documents, and interactive displays.

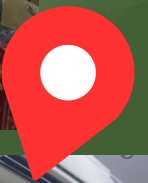


# Heroes Monument



**Heroes Monument (Tugu Pahlawan) is one of the most important historical landmarks in Surabaya. The monument was built to commemorate the heroes who fought during the Battle of Surabaya against colonial forces. Standing about 41 meters tall, the monument symbolizes the courage and sacrifice of Indonesian fighters in the struggle for independence. Today, the site also includes a museum that displays historical artifacts, photographs, and information about the battle, serving as a place of remembrance and education for visitors.**

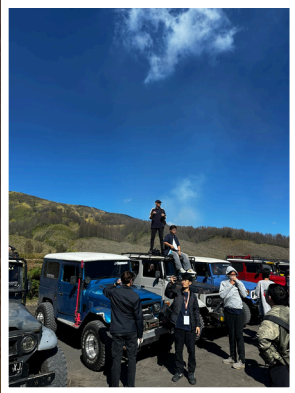
# SHOPPING AT MIRATA BATIK



Shopping at Mirata Batik in Surabaya offers visitors a great opportunity to explore traditional Indonesian batik products. The store provides a wide variety of batik clothing, fabrics, and souvenirs featuring unique patterns and cultural designs from different regions of Indonesia. Visitors can find items such as batik shirts, dresses, scarves, and handicrafts at reasonable prices, making it a popular destination for tourists who want to experience local culture and purchase authentic batik products.

# BROMO

## Mountain Trip



Mount Bromo is one of the most famous natural attractions in East Java, located within Bromo Tengger Semeru National Park. The volcano is well known for its dramatic landscape, including a vast sea of sand, an active volcanic crater, and spectacular sunrise views. Visitors often travel to Mount Bromo early in the morning to watch the sunrise from nearby viewpoints before crossing the sand sea to reach the crater. The area is also culturally significant to the Tenggerese people, who hold traditional ceremonies there. Mount Bromo is one of the most popular tourist destinations near Surabaya.

# Extra Activities



## ITS Student Talent

ITS Student Talent is an activity that allows outstanding students to present their work.



## Fun Bahasa Indonesia

Fun Bahasa Indonesia refers to an enjoyable activity designed to help people learn and experience the Indonesian language in an engaging way.



## Cultural Session with High School Student (NSA)

## Group Project

