

ITS LABORATORY PROFILE



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LABORATORY OF ARCHITECTURAL DESIGN

Architecture Department - ITS

Laboratory Activities

Supports teaching activities and curriculum, concern on research topics:

- Architectural Design
- Structure and Architecture
- Architectural Computation
- Landscape Architecture.

Facilities

The laboratory has design work places which equipped with computational design softwares, a meeting room and workplace for head of the laboratory.

Current Research and Project

Inclusive Bus Stop and Pedestrian Way Design; Innovative Kampong Design in Support of Sport City, Thematic Campus Design; Model of Tropical Building Design; Building with recycle brick. innovative concept in dense old city based on Sustainable Urban Landscape, The Concept of Accesibility for Cemetary, Sustainable Revitalization on the Fisher Settlement, Transformation of Nusantara Architectural Geometry, Masterplan of Campus, Detailed Engineering Design for Building.

General Information :

Departement	Architecture
Faculty	Faculty of Architecture, Design, and Planning
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Head of Laboratory

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LABORATORY OF ARCHITECTURAL HISTORY, THEORY AND CRITICISM

Architecture Department - ITS

Laboratory Activities

The laboratory develops critical capacities to examine questions of architectural production, representation and agency within theoretical, historical, and contemporary milieu. It also engages critically with the history of buildings and architectural concepts, and with the past and present culture of architecture. The laboratory will be researching on: architectural history, philosophy, and theory field. The main goal of this research cluster is to identify and use novel research methods in architectural history and theory to understand architecture through the studies of aesthetics, function, meaning, stylistics, tectonics, structure and construction. The emphasis is placed simultaneously on its critical and appreciation method as the substance, as well as its principles and method in architectural context.

Facilities

Facilities including the working-space for researcher and students to do project work, tutorials, general study and discussion, exhibition space for architectural and structural models in Nusantara Architecture, reading-library consist of books and researches on History, Theory and Criticism field, academic staff offices. It also equipped with drawing boards and storage, computer access and printers, as well as high speed wireless broadband for students to access with their laptops.

Current Research and Project

Taking architecture in Indonesia as its primary focus, members work in interdisciplinary modes. We explore a range of topics relating to theoretical and philosophical knowledge in Nusantara Architecture, history of architecture, materials and its tectonics; aesthetics and the built environment; heritage and emergent conservation practices. We develop discursive fronts through a variety of media and scales. The cluster research encompasses scholarly, creative and advocacy activities. Output includes monographs, edited volumes, research papers, architectural reviews in professional journals, and conservation work, and policy-influencing advocacy work on heritage. The current research and project is on the inventory of diversity form in Nusantara Architecture, working research and book on Theory of Design Process, collaborative research with other laboratories in Department of Architecture on the topics as follows: spatial cognition and elements of the city, concept of sustainable urban landscape-based cities in old city areas of Surabaya and strategy for climate control in colonial buildings in humid tropic.

General Information :

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Head of Laboratory

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LABORATORY OF ARCHITECTURAL SCIENCE AND TECHNOLOGY

Architecture Department - ITS

Laboratory Activities

Laboratory of architectural science & technology is one among five laboratories in architecture department. It was established in 1984. The laboratory focuses in the development of teaching and learning materials as well as researches in the field of architectural science and technology (i.e. energy, ecology, acoustics, lighting, ventilation, and thermal). Aside from that the laboratory also facilitates the learning process in both undergraduate and postgraduate levels. In addition, the laboratory also provides technical assistance for the community, industry, private sectors, and government institutions.

Facilities

The facilities of the laboratory are a workplace with five qualified computers installed with several building simulation programs, several high quality and considerably new environment measurement apparatus such as mini weather stations, thermal, acoustics and lighting measurements devices.

Current Research and Project

1. Evaluation on the effectivity of internal shading devices applied in humid tropical climate.
2. Evaluation on the integration performance of thermal and acoustics environment: a tropical design model.
3. Inner courtyard design for thermal comfort design for housing in humid tropical area.
4. Climate design strategies of the colonial buildings in humid tropical area.
5. Cooling and lighting energy performance of educational buildings in Surabaya.
6. The influence of building configurations on outdoor thermal environment of high-rise apartment (rusunami) buildings in Indonesia.
7. Application of courtyard as a part of natural ventilation in the design of high-rise apartment (rusunami) buildings in Indonesia.

General Information :

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Head of Laboratory

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LABORATORY OF HOUSING AND HUMAN SETTLEMENTS

Architecture Department - ITS

Laboratory Activities

The Laboratory of Housing and Human Settlements focuses its research on the sustainability and affordability of housing and human settlements and harmony with nature. Research topics are grouped in eight clusters: Kampung settlement and houses, Formal housing and settlement, Housing by people, Land and infrastructure, Strategic settlement, Housing finance and management, Disaster management and Social, culture and environment. In addition to facilitating academic programmes for undergraduate and post graduate levels in the department of Architecture, laboratory activities include research, trainings and public service.

Facilities

The laboratory is equipped with source materials such as books and journals related to housing and human settlement, researchers working space and meeting room. There are currently two professors, nine research staffs and two research assistance in the laboratory with specific expertise in housing and human settlements studies.

Current Research and Project

Current research: Urban Kampung Development towards Smart City Surabaya (Purwanita Setijanti), Flats Evaluation to Support City Revitalisation in Coastal Area (Dewi Septanti), Spatial Flexibility in Urban Kampung (Adinda Sih P.R.U), Open Building Implementation in China Town Pekalongan (Tanti S.Nasution), Fishermen's Housing and Human Settlement Culture-based Development (M. Faqih), The Contribution of Balcony to Thermal Comfort and Space Use in Walk-up Flats Surabaya (Rika Kisnarini). We are promoting an interdisciplinary and multidisciplinary research and projects as well as international collaborations. The latest project (2017) of this kind is on Anthropology Exploration of Surabaya's Kampung with the University of Vienna.

General Information :

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Faculty	Faculty of Architecture, Design, and Planning
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Head of Laboratory

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LABORATORY OF URBAN DESIGN

Architecture Department - ITS

Laboratory Activities

The main activity of this Laboratory is conducting researches assign by Minister of Research and Technology funded by the central government. Basically these researches are based on Lab Base Education (LBE). The results of the learning process in Master Degree, especially those related to research method are applied in the process of conducting the research. The results of this process are then used to improve or develop the learning process and student assignment in class, and the writing of new handout.

Facilities

Facilities are differentiated in two categories. First, facilities that are support technical activities such as computer, printer and scanner. This Laboratory is also equipped with library and/or literature. Selected student assignment results are documented for the purpose of feedback in conducting researches. Secondly, facilities that are used for non technical activities, such as dining plates and glasses.

Current Research and Project

As Urban Design Laboratory, the research is focused on urban morphology concentrating on urban designing, starting from a group of dwelling, and then groups of dwellings called a settlement forming districts until urban as a whole. The current researches are, one, re-arrangement of settlements along river bank in the context of urban and environment friendly area. Two, re-arrangement of settlements along railway in the context of urban and environment friendly area. Three, re-arrangement of Soetomo General Hospital surrounding area in the context of urban and environment friendly area in Surabaya.

General Information :

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Head of Laboratory

Prof. Endang Titi Sunarti, M. Arch, Ph.D.

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LABORATORY OF BIOSCIENCE AND PLANT TECHNOLOGY

Biology Department - ITS

Laboratory Activities

The main activities in laboratory are education (practice), research, and community services. Laboratory settings can provide students with the opportunity to apply their content understandings in new situations and apply the skills. Laboratory work usually entails an element of group work, so let's begin with some of the differences between individual and group assessment. Usually laboratory settings are favorable for small group, collaborative work. This work increases communication and application of content knowledge to the task at hand.

Facilities

Laboratory of Bioscience and plant technology is a Laboratory based education, and has 3 Laboratories, they are laboratory of plant tissue culture, laboratory of research, and laboratory of education. Facilities in laboratory are plant tissue culture equipment, and the other laboratory equipment that support laboratory activities like practice and research.

Current Research and Project

Botanical pesticides

- Identification and inventory of potential crops
- Formulation and production of botanical pesticides

Biomass-based energy

- Bioetanol production from organic waste
- Development of -based algae biodiesel (Optimization of TAG (Triacyl Glycerol) via stress technology

Biofertilizer (micorhyza)

- Production of mycorrhiza consortium for dry land biofertilizer

Plant metabolic engineering

Plant in vitro culture

- Screening in vitro plants resistant to drought, salinity stress etc.
- Optimization and formulation of media
- Production of synthetic Seed via in vitro culture for conservation

Biology molecular

- genetic analysis of diversity and the expression of specific genes

General Information :

Departement	Biology
Faculty	Science
Address	H Building ITS Campus
Telephone	Tel. +62315963857/Fax. +62315863857
Website	biologi.its..ac.id



Head of Laboratory

Wirdhatul Muslihatin, S.Si., M.Si

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LABORATORY OF ECOLOGY

Biology Department - ITS

Laboratory Activities

We conducting practices in the laboratory and the field for lectures includes Oceanography, Plant and Animal Ecology, Marine Biology and Ecology, Limnology, Biology of Coral, Biomonitoring, Insect Ecology, Plant-Animal Interaction. Our research focused on - mitigation and organismal adaptation to climate change, responses of organisms to anthropogenic activities, biology and ecology of coral reef and bird communities, ecotoxicology and biomonitoring, natural product as antifouling materials, habitat restoration, stress-tolerant food plants, biodiversity and conservation of aquatic and terrestrial organism. We also do community service activities such as training in bioecology sampling techniques, scientific diving training, workshop on the ecology of mangroves, coral reefs, etc. (to local communities and government agencies), compilation of standards for mangrove and coral reef rehabilitation, compilation of books on biodiversity and bioecology sampling

Facilities

Microscope Room : The microscopy lab. is well equipped with a number of binocular microscopes (with phase contrasts) capable of up to 1000x magnification along with several dissection microscopes (20x magnification). Suitable for a wide variety of applications, these microscopes are most commonly used for the counting and identification of plankton, meiofauna, stomata. Cold Storage : our cold store is used for storing subsamples and specimen (amongst other materials). Field Equipments : Diving & Snorkeling Equipments, Binocular & monocular scope, Kitahara & Norpac plankton net, Insect net, Garmin GPS devices, Pocket EC/TDS and pH Tester, Dissolved Oxygen meter, Lux meter, Soil borer, Hand Salino Refractometer.

Current Research and Project

We have the following research group : Marine Biodiversity and Conservation (MaBioC), Habitat Adaptation and Mitigation for Climate Change (HAMCC), Ecological Toxicology and Bioremediation (EcoTox). Current research issues :

- Exploration and development of saline tolerant paddy, Modelling and sensitivity analysis of photosynthesis of high- yielding paddy cultivar at elevated CO₂
- Habitat modification for habitat adaptation design, Development of climate change knowledge management using migratory birds and plant-animal interaction
- Construction of artificial reef model for coral reef rehabilitation, Modelling adaptation and responses of coral reef to natural and anthropogenic-induced stressors, Soft coral farming to enhance economic capacity of coastal inhabitants
- Exploration of natural products as anti-fouling materials (tobacco dust, durian waste, marine sponges, synthetic terpenoids)
- Diversity of fish larvae and juveniles on different structural mangrove habitat to enhance coastal fisheries

General Information :

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Faculty	Science
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Website	https://www.its.ac.id/biologi/id/fasilitas/laboratorium-2/ekologi/



Head of Laboratory

Indah Trisnawati, M.Si., Ph.D

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LABORATORY OF MICROBIOLOGY AND BIOTECHNOLOGY

Biology Department - ITS

Laboratory Activities

The main activity of this Laboratory is conducting researches assign by Minister of Research and Technology funded by the central government. Basically these researches are based on Lab Base Education (LBE). The results of the learning process in Master Degree, especially those related to research method are applied in the process of conducting the research. The results of this process are then used to improve or develop the learning process and student assignment in class, and the writing of new hand-out.

Facilities

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Current Research and Project

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General Information :

Departement	Biology
Faculty	Science
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Head of Laboratory

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LABORATORY OF ZOOLOGY & ANIMAL ENGINEERING

Biology Department - ITS

Laboratory Activities

Our lab focused on two major interest which are dealing with animal biodiversity and conservation in addition to exploration of marine and coastal resources that can be utilized for food safety and medicinal treatments in East Java. Some of laboratory activities are, exploration and conservation of marine invertebrates such as sponges, arthropods and mollusks, in addition of marine and brackish vertebrates such as fishes that can be utilized for food safety and medicinal values. In addition, we also investigate on impact of environment, natural disaster or pollution on sustainability of fisheries and conservation efforts. Moreover, we also investigate and create a new technology that can be utilized for aquaculture effort.

Facilities

- Aquaculture facilities
- Instrumentation devices for analyzing marine organism structure such as microscope and spectrophotometer
- Environmental analyzer devices such as ph. meter and etc.

Current Research and Project

- Diversity of shallow water sponges in East Java
- Fisheries sustainability after one decades of Mud Natural Disaster in Sidoarjo East Java
- Fisheries sustainability focusing on Tuna production in East Java
- Aquaculture technology on query land of Indonesian Cement in Tuban East Java
- Floating net cage innovation in south coast of Malang and Trenggalek East Java
- Potency of anticancer from sponges and immune-stimulant substance from snake head fish in East Java

General Information :

Departement	Biology
Faculty	Science
Address	H Building ITS Campus
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Website	http://www.bio.its.ac.id/



Head of Laboratory

Dr.rer.nat Edwin Setiawan S.Si, M.Sc

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LABORATORY OF BIOMEDICAL ELECTRONICS AND BIOCYBERNETICS ENGINEERING

Biomedical Engineering Department - ITS

Laboratory Activities

Biomedical electronics laboratory is devoted to develop the skills and the practical background necessary to design, test, calibrate, and repair advanced medical equipment and instrumentation, also biomedical signal processing analysis. Biocybernetics engineering laboratory is devoted to develop mechanism of computation, communication, and control processes in biological system and applications in biological, electronics, and mechanical systems.

Facilities

- Basic BME instrumentation module, basic biomedical signal process module, basic data communication for biosignal module Motion capture system
- Portable FES control system, portable ultrasonic diagnostic system
- Wearable sensor system for human movement analysis and relay
- Ultrasound machine, VR head mounted display, hand robot
- Braille module v2.0

Current Research and Project

- Biomedical instrumentation : Embedded ECG using ARM, wearable human movement sensor
- Advanced signal processing : Cardiac multimodal signal analysis
- Rehabilitation engineering : Multichannel closed loop Functional Electrical Stimulation system, gait analysis
- Image processing : Braille Character Recognition Using Artificial Neural Network

General Information :

Departement	Biomedical Engineering
Faculty	Electrical Technology
Address	Building B, C and AJ, Institut Teknologi Sepuluh Nopember
Telephone	031 5923644
Website	www.its.ac.id/tbiomedik/



Head of Laboratory

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LABORATORY OF MICROBIAL CHEMISTRY

Chemistry Department - ITS

Laboratory Activities

Our laboratory focused on utilization of microbial activities in human life, range from studying anti-biotic producing bacteria, enhancing yoghurt production, to bioremediation for Persistent Organic Pollutants (POPs) such as DDT and dyes. We also conduct laboratory practices for courses, such as Biochemistry (introduction to microbiology), Bioprocess (isolating proteins, etc), Bioassay (Anti-bacterial test, etc).

Facilities

Our laboratory has sufficient facilities to conduct laboratory practices in microbiology such as laminar air flow, incubator, shaker incubator, autoclave, freezer, etc. We also have evaporator, centrifuge, shaker for the cases that the sample needs further extraction. The laboratory is also equipped with spectrophotometer, BioTek microplate reader, High Performance Liquid Chromatography (HPLC) for further assessment of analytes.

Current Research and Project

Currently our laboratory conduct research on:

- Biodegradation of DDT by Mixed Fungi and Bacteria in Soil
- Biodegradation of Methyl Orange (MO) by Mixed Fungi and Bacteria Using Fenton Reaction
- Biodegradation of Methylen Blue (MB) by Mixed Fungi and Bacteria Using Fenton Reaction
- Dry Water Hyacinth Hydrolysis Fermentation to be Ethanol by *Zymomonas mobilis* and *Saccharomyces cerevisiae*
- Analysis of The Effect of Bacteria Addition on Yoghurt Production

General Information :

Departement	Chemistry
Faculty	Science
Address	Jl. Teknik Mesin No. 175, Second Floor, ITS Campus Sukolilo
Telephone	-
Website	http://chem.its.ac.id/kimia-mikroorganisme/



Head of Laboratory

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LABORATORY OF TRANSPORTATION AND GEOTECHNICAL

Civil Infrastructure Engineering Department - ITS

Laboratory Activities

- Education : Serving practice for Diploma 3 and Applied Bachelor (D4) of ITS students, Private Universities, and other Institutions.
- Research : Providing facilities and infrastructure for research activities by lecturers and students.
- Community service : Providing services to community.

Facilities

The laboratory has 600 m² room facilities including offices, Engineering Service Room, Transportation laboratory, and Geotechnical laboratory.

Main Equipment of Transportation laboratory : Field CBR test and Laboratory CBR, Sand Cone and Proctor, Plate Bearing Test, Sand Equivalent Test, Benkleman Beam, Los Angeles Abrasion Test, Core Drill, Stone Crusher, Penetration Test, Extraction Test, Distillation of cutback asphalt, Saybolt Viscometer, Ductility Test, Flash and Fire, Marshal Test.

Main Equipment of Geotechnical laboratory : Depth & Shallow boring, Standart Penetration Test (SPT), Cone penetration test (Sondir), Sand Cone dan Proctor test, Unconfined Compression Machine, Consolidation test, and Triaxial Test

Current Research and Project

- Plastic Waste materials for road construction.
- Study on soil improvement using plaxis
- Vacum PVD in laboratory scaled tests
- Development of sandwich foam core materials

General Information :

Departement	Civil Infrastructure Engineering
Faculty	Vocational
Address	ITS Manyar Campus, Jl. Menur 127 Surabaya
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Head of Laboratory

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LABORATORY OF INSTRUMENTATION, MEASUREMENT & POWER SYSTEM IDENTIFICATION

Electrical Engineering Department - ITS

Laboratory Activities

- **Education** – practice for student and industry, calibration and measurement testing
- **Research** – group research with under graduate student (S1), graduate student (S2&S3) as well as university and industry in Indonesia and also university in overseas such as Hiroshima University, Japan; New South Wales University, Australia; Universiti Malaysia Perlis, Malaysia; and California Polytechnic University, USA
- **Service** – provide consultant and training for industry such as PLN, Pertamina, PKT, PUSRI, LINDE, Petrokimia, PT. BJTJ, ABC Kraft Heinz, etc.

Facilities

Power Quality Measurement, Earth Resistance Measurement, Voltage-Current-Ohm Calibration, Power System Protection Practice, Software ETAP education license, Software Digsilent Power Factory research license for unlimited buses, Power Quality and Transient Stability on line monitoring system device and Power Quality & Digital Relay Protection system device

Current Research and Project

1. Design Real Time Transient Stability Assessment Based on Critical Trajectory Method for Reliability and Security Smart Grid System Operation
2. Super Capacitor Energy Storage for Wind Turbine
3. Intelligent Electronic Device for "Digital Protection Relay and Power Quality Monitoring" to Guarantee Sustainability and Quality of Electric Power in Electric Power System Network
4. Developing Power Control Coordination Method Hybrid Systems (Photovoltaic Cell-Wind Turbine-Biogas) Interconnected on Grid with Single Phase Public Electric Company (PLN) Network
5. Master Plan Study for Kalimantan Electric System, PT. PLN
6. Joint Study PLN and Sabah for Exporting Electric Energy to Sabah, PT. PLN

General Information :

Departement	Electrical Engineering
Faculty	Electrical Technology
Address	Electrical Engineering Department FTE-ITS, Campus ITS
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Head of Laboratory

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LABORATORY OF VIBRATION AND ACOUSTICS LABORATORY (VIBRASTICLAB)

Engineering Physics Engineering Department - ITS

Laboratory Activities

Vibration and Acoustics Laboratory as well as known as VibrasticLab is one of Engineering Physics Department laboratory. This laboratory aims to understand physics phenomena of sound and vibration and its implementation for advancing technology for the benefit of humanity. VibrasticLab is certified as LBE (Lab Based Education) by JICA through ITS – Preditc2 JICA Project. It means this laboratory develop human resources in engineering field with practical skills through research activities in a team in order to strengthen education, research, and laboratory-industry collaboration.

Facilities

Our laboratory offers a wide range of analytical testing services, which include the following: material acoustics testing, environmental impact assessment (ground vibration and structural vibration), and acoustics analysis (noise impact analysis, architectural acoustics treatment, noise mapping, etc.).

We also provide facilities such as semi-anechoic chamber, impedance tube, class-1 sound level meter, NI cDAQ, accelerometer, omnidirectional microphone, and vibration meter.

Current Research and Project

Current Research: Natural Indonesian Speech Synthesis, Noise Mitigation in Hospital, Underwater Acoustics – Synthetic Aperture Sonar, Noise Abatement in Open-plan Offices, Noise Induced Hearing Level, Vibration – Transfer Path Analysis, Structural Vibration, Cochlear Implant, and Whole-body Machine Vibration Measurement.

Current Project: Noise Control in Train Passenger collaboration with PT. INKA, Joint Operating Body Pertamina Petrochina East Java - Noise Mapping, Steam Turbine noise detection (PT. Linde Indonesia Group), Pump Vibration Measurement (IPAM Karangpilang III, PDAM Surabaya), Environmental Noise Impact caused by LRT – PT. Adhi Karya, and Haul Road Condition Monitoring - PT. Valle.

General Information :

Departement	Engineering Physics
Faculty	Industrial Technology
Address	E-101 Building, Engineering Physics Department
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Website	http://vibrastic.ep.its.ac.id/



Head of Laboratory

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LABORATORY OF INSTRUMENTATION AND CONTROL ENGINEERING

Engineering Physics Department - ITS

Laboratory Activities

Instrumentation and Control Engineering Laboratory is a laboratory based research-education which is focuses in instrumentation engineering, proses design, modelling, control and optimization theory and application consisting of mathematical equations, algorithms, new methods and development methods. Our laboratory activities are research, studies (study club larins), international conference.

Facilities

Instrumentation and Control Engineering Laboratory is a laboratory based research-education which is focuses in instrumentation engineering, proses design, modelling, control and optimization theory and application consisting of mathematical equations, algorithms, new methods and development methods. Our laboratory activities are research, studies (study club larins), international conference.

Current Research and Project

Current Research and Project about :

- Process optimization to get the maximum product, uniform composition, minimal energy, environmentally safe.
- Conventional control, optimal and economical.
- Control and optimization algorithms.
- Advanced instrumentation for industrial process purposes or other purposes.

General Information :

Departement	Engineering Physics
Faculty	Industrial Technology
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Head of Laboratory

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LABORATORY OF AIR POLLUTION CONTROL AND CLIMATE CHANGE

Environmental Engineering Department - ITS

Laboratory Activities

This laboratory focusses on analysis of air pollution control, and its impact on the environment, as well as the greenhouse effect on global climate change. Supported by experience laboratory assistant, and headed by an expertise professor on their field. Environmental engineering department laboratory also serve analysis, practice and research activity.

Facilities

- Gas Chromatograph
- Photometer spectrum
- pH meter
- Conductivity, for analysis of turbidity of water Rotator agitator
- Furnace
- Bomb Calorimeter

Current Research and Project

- Multiple Point Source Dispersion Analysis of CO, NO₂, PM₁₀ and SO₂ from Paiton Power Plant using Calpuff
- The Effect of Land Cover Change on Surface Temperature Based on Satellite Image in Thirty Cities of Indonesia
- Effect Of pH On Liquid-Phase Mass Transfer And Diffusivity Coefficient At Leachate Treatment Of Municipal Waste Landfill In Anaerobic Bioreactor
- Application of Exponential Smoothing Holt Winter and ARIMA Models for Predicting Air Pollutant Concentrations.
- Assessing Factors that Affect Selection of Adaptation Strategies for Small Scale Fishing Communities



General Information :

Departement	Environmental Engineering
Faculty	Faculty of Civil, Environmental and Geo Engineering
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Head of Laboratory

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LABORATORY OF ENVIRONMENTAL QUALITY MANAGEMENT

Environmental Engineering Department - ITS

Laboratory Activities

This laboratory facilitates practicum in the subject of Environmental Quality Management. Serve analysis and management of environmental quality. Supported by experience laboratory assistant, and headed by an expertise professor on their field. Environmental engineering department laboratory also serve analysis, practice and research activity. This laboratory is Lab Based Education (LBE) certified.

Facilities

- GC, Gas Chromatograph
- Photometer spectrum, pH meter, conductivity, for analysis of turbidity of water Rotator agitator
- Furnace
- Bomb Calorimeter, heat analysis

Current Research and Project

- Hazard Risk Assessment for Use of Water Refills as Fulfillment of Clean Water and Attempts to Minimize the Negative Impact
- Analysis of Aluminum Metal Content from Water and Sediment in Surabaya River
- Study of Processing Waste Water Washing Jeans with Physical-Chemistry and Biological Methods Laboratory Scale
- Bioremediation Technology for Recovering Polluted Seas Due to Ship Demolition Activities at Tanjung Jati Madura Beach
- Design of Biogas Digester from Biomass Mixtures Containing Lignocellulose and Animal Impurities as Appropriate Technology

General Information :

Departement	Environmental Engineering
Faculty	Faculty of Civil, Environmental and Geo Engineering
Address	Environmental Engineering Building, ITS Campus Sukolilo
Telephone	+6231-8948886
Website	www.enviro.its.ac.id / https://goo.gl/2TfQQy



Head of Laboratory

Prof. Dr. Ir. Nieke Karnaningroem, MSc,

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LABORATORY OF ENVIRONMENTAL REMEDIATION

Environmental Engineering Department - ITS

Laboratory Activities

This laboratory facilitates the Water and Coastal Body Remediation courses, where the Learning Outcomes are mentioned to be able to identify the causes of water body pollution and design the control system and its recovery efforts. Supported by experience laboratory assistant, and headed by an expertise professor on their field.

Environmental engineering department laboratory also serve analysis, practice and research activity. This laboratory is Lab Based Education (LBE) certified.

Facilities

Analytical balance
Desiccator and Centrifuge
Spectroquant and Spectroquant (Thermoreactor)
Shaker and PH meter
Spectrophotometer
Kjeldahltherm and Kjedadl Distilator

Current Research and Project

- Performance Evaluation of Housing Contractor by Applying the Principles of Environmentally Friendly Infra structure
- Technical Evaluation of Residential Wastewater Treatment Plant in West Lombok Regency
- The Use of Macroelements from Municipal Sewage Sludge by the Multiflora Rose and the Virginia fanpetals
- The Effect of Light-Emitting Diodes Illumination Period and Light Intensity on High Rate Algal Reactor System in Laundry Wastewater Treatment
- Identification of Acid and Aluminium Resistant Bacteria Isolated from Aluminium Recycling Area
- The Effect of pH and Aluminium to Bacteria Isolated from Aluminium Recycling Industry

General Information :

Departement	Environmental Engineering
Faculty	Faculty of Civil, Environmental and Geo Engineering
Address	Environmental Engineering Building, ITS Campus Sukolilo
Telephone	+6231-8948886
Website	www.enviro.its.ac.id / https://goo.gl/2TtQQy



Head of Laboratory

Prof. Dr. Ir. Sarwoko Mangkoedihardjo, MScES

prosarwoko@gmail.com

LABORATORY OF SOLID WASTE MANAGEMENT AND HAZARDOUS TOXIC MATERIAL

Environmental Engineering Department - ITS

Laboratory Activities

This laboratory facilitates practicum in the subject of Environmental Chemistry and Environmental Microbiology: Serving: solid waste testing and processing of hazardous and hazardous materials. Supported by experience laboratory assistant, and headed by an expertise professor on their field. Environmental engineering department laboratory also serve analysis, practice and research activity. This laboratory is Lab Based Education (LBE) certified.

Facilities

- GC, Gas Chromatograph
- Photometer spectrum, pH meter, conductivity, for analysis of turbidity of water Rotator agitator
- Furnace
- Bomb Calorimeter, heat analysis

Current Research and Project

- Technology of Waste Conversion in Sidoarjo Regency Becomes Protein and Energy
- Environmentally Friendly Composting Technology for Solid Waste Management of Slaughterhouses
- Role of Biosurfactans and Compost Humic Acid Like Substance as Emulsifier on Recovery of Contaminated Soil Earth by The Posting Method
- Identification of the Potential of City Surabaya Waste Disposal with Thermal Method
- Study of the Potential for Collection of Flexible Plastic Waste from TPS3R in East Java

General Information :

Departement	Environmental Engineering
Faculty	Faculty of Civil, Environmental and Geo Engineering
Address	Environmental Engineering Building, ITS Campus Sukolilo
Telephone	+6231-8948886
Website	www.enviro.its.ac.id / https://goo.gl/2TtQQy



Head of Laboratory

Prof. Dr. Yulinah Trihadiningrum, M.App.Sc.

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LABORATORY OF WATER TREATMENT TECHNOLOGY

Environmental Engineering Department - ITS

Laboratory Activities

This laboratory focuses on analyzing drinking water, monitoring the quality and management of drinking water. Supported by experience laboratory assistant, and headed by an expertise professor on their field. Environmental engineering department laboratory also serve analysis, practice and research activity. This laboratory is Lab Based Education (LBE) certified.

Facilities

- GC, Gas Chromatograph
- Photometer spectrum, pH meter, conductivity, for analysis of turbidity of water Rotator agitator
- Furnace
- Bomb Calorimeter, heat analysis

Current Research and Project

- A new concept for marine environmental sustainability through recovery of magnesium carbonate from traditional salt production wastewater
- Study the Performance of Slow Sand Filters with the Help of White Light Emitting-Diode (LED) Lights
- An approach to identify soil types by using hydraulic conductivity values
- Preliminary study of infiltration gallery for water treatment towards Universal Access 2019 in Indonesia.
- Synthesis of Magnesium Carbonate Polymorphs from Indonesia Traditional Salt Production Wastewater
- Potential of biomass residues from oil palm agroindustry in Indonesia
- Sustainable kampong model in Kelurahan Keputih, Kejawan Putih Tambak and Gebang Putih of Surabaya City
- Providing simple healthy latrine based on community empowerment in Gebang Putih Village and Kejawan Putih Tambak Village

General Information :

Departement	Environmental Engineering
Faculty	Faculty of Civil, Environmental and Geo Engineering
Address	Environmental Engineering Building, ITS Campus Sukolilo
Telephone	+6231-8948886
Website	www.enviro.its.ac.id / https://goo.gl/2TtQQy



Head of Laboratory

Prof. Wahyono Hadi, MSc, PhD

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LABORATORY OF GEOPHYSICAL EXPLORATION

Geophysical Engineering Department - ITS

Laboratory Activities

Geophysical Exploration Laboratory provides the geophysical data processing, theoretical & applied geophysical methods and near surface geophysics exploration; mineral exploration, , environmental geophysics, geothermal, and hydrogeology. These laboratory emphasize on the application of geophysical sciences, among others : gravity method, magnetic method, resistivity method, selfpotential method (SP), microtremor method, electromagnetic method, geothermal, geotechnical and remote sensing. Main current research in Geophysical Exploration were focused on research on exploration of karst areas, hydrogeological system and, geothermal systems. Geophysical Exploration Laboratory also provides practical activities for students in department. In addition, they also work on projects that are relevant to exploration geophysics, such as projects from government, companies, private sector, etc.

Facilities

The implementation of laboratory activities is supported by a number of laboratory and field instruments and software, among others

- Field tools : Seismic, Resistivity meters, Microtremor, Drill Tools, Geological Tools, GPS Handheld, Compass Geology
- Laboratory equipments : Computer device completed by geophysical data processing programs.
- Software : GIS, Matlab, Res2Dinv, IP2Win, Geopsy, Surfer, Rockworks, IP, Petrel, Hampton-Russel, Vista, Tesseral Pro

Current Research and Project

These early researches came up with a number of important discoveries and only a very short and incomplete listing can be given here. Some of these important discoveries and observations include:

1. Sustainable management in Karst Region Pacitan, East Java
 - Karst-rock exploration
 - Water potential of underground rivers system exploration
 - Cave system exploration
 - Remote sensing
 - Regulation and management karst region in Pacitan based on Local Indigenous; Geotourism, Agriculture, and Socio-Culture
2. Subsurface mapping in Sumenep Regency as a Non-Volcanic Geothermal Study
3. Interpretation of volcanic rocks petrophysics for the inventory of Mount Arjuno-Welirang Geothermal Resources
4. Hydrogeological System of Tengger/Bromo Mountain.

General Information :

Departement	Geophysical Engineering
Faculty	Faculty of Civil, Environmental and Geo Engineering
Address	Kampus ITS, Keputih Sukolilo, Surabaya 60111
Telephone	(031) 5953476
Website	geofisika.its.ac.id



Head of Laboratory

Dr. A. Syaeful Bahri, S.Si., M.T.

nugrahbahri@gmail.com

LABORATORY OF PETROPHYSICS

Geophysical Engineering Department - ITS

Laboratory Activities

- Petrophysics Research & Laboratory provides the geophysical data processing, theoretical and applied seismology, earthquake studies, geodynamics, magnetotellurics, environmental geophysics, geothermal energy, and geophysical instrument. Main current research in Petrophysics Laboratory were focused on petrophysics study, the deep surface method and geophysical instrument development
- The goal of research in this area is to advance understanding of Earth structure and evolution through the application of physical principles. Activities include experimental, theoretical, computational, and field studies applied to fundamental research, and to the economic development and environmental protection of our planet/Sustainability.
- Petrophysical Researches aimed the connections between elastic properties measured at the surface of the earth, within the borehole environment or in the laboratory with the intrinsic properties of rocks, such as mineralogy, porosity, pore shapes, pore fluids, pore pressures, permeability, viscosity, stresses and overall architecture such as laminations and fractures. Petrophysics provides the understanding and theoretical tools required to optimize all imaging and characterization solutions based on elastic data

Facilities

- The implementation of laboratory activities is supported by a number of laboratory and field instruments and software, among others
- Field tools: Seismic, Resistivity meters, Drill Tools, Geological Tools
 - Laboratory equipments: GPS Handheld, Compass Geology, soil permeability test, Oscilloscope, Ultrasonic
 - Software: Matlab, Rockworks, IP, Petrel, Hampton-Russel, Vista, Tesseral Pro

Current Research and Project

- These early researches came up with a number of important discoveries and only a very short and incomplete listing can be given here. Some of these important discoveries and observations include:
- Joint Inversion of Deep Surface Methods : Gravity, Magnetotelluric. Seismic
 - Interferometry
 - Magnetotelluric observations of East Java Basin
 - Multi Electrode Resistivity
 - Applied High Resolutions Geophysical Methods for Geological Structure
 - Paleoseismic
 - Rock Physics Measurements in Sediment Formations and Volcano Environments
 - Rock Magnetism
 - Geostatistical Application
 - Instrument Development
 - Seismic Hazard Risk Assessment

General Information :

Departement	Geophysical Engineering
Faculty	Faculty of Civil, Environmental and Geo Engineering
Address	Geomatics Building 2nd Floor, ITS Raya Street, Sukolilo, Surabaya, East Java
Telephone	(+6231)5953476
Website	http://geofisika.its.ac.id/



Head of Laboratory

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LABORATORY OF MANUFACTURING SYSTEM

Industrial Engineering Department - ITS

Laboratory Activities

Manufacturing System Laboratory is established in around 1989, one of the first laboratory in Industrial Engineering Department in ITS. This laboratory support three main roles of ITS, they are: teaching, research and community service including collaboration with government and private institutions. In general, Manufacturing System Laboratory manages and offers several compulsory courses and elective courses for undergraduate and post graduate students (see table 1). Some courses involves laboratory works that requires several equipments and softwares that has been available in the laboratory (table 2). Manufacturing System Laboratory covers seven research area (figure 1) which are: (1) Manufacturing System Design, (2) Technology Management, (3) Quality, (4) Reliability Engineering and Safety Analysis, (5) Sustainable/Green Manufacturing, (6) Computer Integrated Manufacturing, (7) Collaborative Product Design and Process Development. This research area is offered as research topic for undergraduate and postgraduate students every semester. Community services have been conducted to help finding practical solutions based on local community problems such as small and medium enterprise around Surabaya and East Java area. Collaboration have been conducted with industries and other institutions such as research and publication collaboration, projects, visiting professor, etc.

Facilities

3D Printing, CNC Vertical Miling, Toyota Engine, Rolling Machine, Lathe Machine, Drilling Machine, Casting, Lean Production System Simulation, DFMA, SolidWork, AUTOCAD

Current Research and Project

Research

1. Operational Risk Management Study of Offshore Aquaculture FARM-ITS
2. Development of Maintenance Strategy Model using Game Theory Approach On Equipment Leasing (ITS Ocean Farm Floating Net Cage)
3. Improving Maintenance Management Efficiency Based on Reliability Centered Maintenance II for Energy Producing Industries
4. Risk Assessment Installation of Offshore Aquaculture FARM-ITS
5. Technology Acceptance Study and Measurement of Offshore Aquaculture FARM-ITS
6. Integration of modified Waste Relationship Matrix and House of Risk for Lean Analysis

Community services

1. Improving Operations / Production Management Competencies for Vocational School Teachers and Students of Surabaya City
2. Improving Education Alignment and Work World Performance With Quality Function Deployment (QFD) Method
3. Development of MSME Business Activities Ex- Localization, Keputih, and Ngancar as Culinary Creative Houses

General Information :

Departement	Industrial Engineering
Faculty	Industrial Engineering
Address	1st Floor, Industrial Engineering Building, ITS Campus Sukolilo
Telephone	+6231-5939361 ext 1306
Website	www.labsisman.ie.its.ac.id



Head of Laboratory

Putu Dana Karningsih, S.T., M.Eng.Sc., Ph.D

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Table 1. List of Undergraduate and Postgraduate Courses

Courses	Undergraduate Program	Magister Program	Doctorate Program
Compulsory	Maintenance and Reliability Techniques	Advanced Manufacturing System	Integrated Manufacturing System
	Engineering Drawing	Quality Engineering	
	Industrial Automation	Green Manufacturing	
	Quality Control Techniques	Reliability Engineering	
	Manufacturing System		
	Industrial Ecology		
	Manufacturing Process		
Elective	Productivity Analysis	Maintenance and Warranty Management	
	Computer Integrated Manufacturing	Product Life Cycle Management	
	Management of Technology	Manufacturing Productivity	
	Six Sigma	Lean Six Sigma	
	Sustainable Manufacturing		
	Environment Management		
	Lean Concept and Its Application		



LABORATORY OF ERGONOMICS AND WORK SYSTEM DESIGN

Industrial Engineering Department - ITS

Laboratory Activities

- Practical Work
- Final Project and Thesis Research
- Scientific Discussion
- Training and Exhibition
- Research & Project
- Service to the Society

Facilities

- Human error room 6 x 7 meters, equipped with environmental factors simulation.
- Tread mill
- Ergo-cycle
- Electric Hand Dynamometer
- Anthropometric chair
- Sound level meter, light meter, anemometer and thermo-higrometer
- Pulse meter, respirometer and garmin smart watch
- Gopro and camera 360°

Current Research and Project

- Maftec : Train Driver Fatigue Detectors to Improve Railway System Safety in Indonesia
- Emergency Response System Development to Minimize Emergency Response Time in ITS Campus
- Model Development of Online Store Purchasing Behavior : A Cognitive Ergonomic Approach
- The Development of Ergonomic Lobster Catcher
- The Development of Indoor Navigation Application Based on Virtual Reality Technology
- Workload Analysis of Call Center Workers.
- Safety Culture Analysis of Manufacturing and Energy companies

General Information :

Departement	Industrial Engineering
Faculty	Industrial Technology
Address	Industrial Engineering Building, ITS Campus Sukolilo
Telephone	+6231-5939361
Website	ie.its.ac.id



Head of Laboratory

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LABORATORY OF LOGISTICS AND SUPPLY CHAIN MANAGEMENT (LSCM)

Industrial Engineering Department - ITS

Laboratory Activities

General Activities:

1. Supporting teaching and learning activities related to logistics and supply chain management field of studies.
2. Producing high quality research that contributes to knowledge development as well as practical application.
3. Producing products and/or services that can be useful for industrial practitioners.

Annual Event: LSCamp - A structured international learning camp in contemporary topics in the fields of LSCM.

Half-year event: LSCM Update - an eventual seminar which discuss the most recent logistics and supply chain issues and presented by experts in the field. Other activities: Company visits, Conferences and Seminars, Alumni Gathering, LSCM Training for professionals, etc.

Facilities

1. Co-working space
2. Group discussion room
3. (ongoing project) Smart Retail with Warehouse Management System and cashless payment system

Current Research and Project

Current Project : Petikemaz - Smart Retail Supply Chain (SRESC) Experiment Project

Current Research :

- Inventory Management for Blood Supply Chains
- Transportation sourcing study: contact and spot market
- Halal supply chain
- Cold storage design
- City logistics



General Information :

Departement	Industrial Engineering
Faculty	Industrial Technology
Address	Gedung Teknik Industri, 4th Floor Industrial Engineering Department
Telephone	+6231-5939361
Website	ie.its.ac.id



Head of Laboratory

Dr. Eng. Ir. Ahmad Rusdiansyah, M.Eng, CSCP

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LABORATORY OF HUMAN CENTERED DESIGN

Industrial Product Design Department - ITS

Laboratory Activities

Research, community service and student practical work. The research include:

1. Physical research, research which is focused on human physical aspects: antropometri, work load, psychophysical and biomechanics.
2. Cognitive research: research which is focused on human cognitive aspects: human-equipment interaction, product standard and sport science.
3. Environmental research, research which is focused on environment aspects and productivity: visual, noise, vibration, air quality and temperature also airflow pattern.

Facilities

1. Physical research: antropometri chair, human modeling, tandem bike prototype
2. Cognitive research: display model, push button model
3. Environmental research: numeric simulation, luxmeter, noise level meter, temperature meter, tachometer, velocity meter

Current Research and Project

1. Design of Air Purifier Bike for Close Distance Transportation Mode, Social Community and While The Initiative to Relegate Air Pollution Intensity in Urban (2017)
2. Electricity Energy Consumption Investigation of Local Air Conditioning System in Apartment Building Unit Through Construction Orientation, Elevation and Building Material Review (2017)
3. Main Frame Structure Exploration of Sliding Tandem Bike as The Effort to Enhance Product Feature (2017)
4. Tandem Bike Design for Apartment Residents as an Idea to Reduce Air Pollution (2016)
5. The Variety of Furniture Arrangement Inside Apartment Unit Around Jabodetabek Area to Improve COPC (2016)
6. The Development of Bicycle into Trandem: The Bike Can be used as Tandem or Single Depend of The Necessity (2014)
7. Split Air Conditioning Selection of Apartment Unit around Jabodetabek Area to Enhance COPc (2014)

General Information :

Departement	Industrial Product Design
Faculty	Architecture Design and Planning
Address	ITS Campus Sukolilo Keputih Surabaya 60111
Telephone	+6231-5931147
Website	its.ac.id



Head of Laboratory

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LABORATORY OF INTEGRATED DIGITAL DESIGN

Industrial Product Design Department - ITS

Laboratory Activities

Laboratory oriented to the integration of digital technology and the design process for the creation of new products. Area of Expertise:

1. 3D Modeling Product (Styling & Simulation)
2. 3D Animation for presentation & simulation
3. Reverse Engineering
4. Additive Manufacturing
5. New Media Tech. (Projecting Screen, Augmented Reality & Virtual Reality, 3D Hologram)

Facilities

1. 3D Printers FDM and DLP/SLA Technology
2. Industrial 3D Scanner
3. Computer Aided Industrial Design (CAID) Room
4. Drone and Camera for Photogrammetry
5. Digital Simulation for Industrial Design

Current Research and Project

- Test of Ethics, In-Vitro Cytotoxic, In-Vivo (Animal step 1) for Custom Implant in Cranioplasty and Craniofacial Surgery based Rapid Prototyping (2018)
- Development of Ophtalmoscopy for Early Detection Eye Retinal to Reduce Risk of Cataract and Diabetes Mellitus Diseases (2018)
- Prototyping of CNC 3 Axis for Woodworking (2018)
- Prototyping of Rattan Bike for Urban People Activities (2018)
- Development of Upper Limb and Lower Limb Exoskeleton for Stroke Rehabilitation (2018)
- Development of Orthosis for Cerebral Palsy (2017)
- 3D Printing Fashion Development (2017)
- Fabrication of Hand and Leg Prosthesis for People with Disabilities based Rapid Prototyping (2017)

General Information :

Departement	Industrial Product Design
Faculty	Architecture Design and Planning
Address	ITS Campus Sukolilo Keputih Surabaya 60111
Telephone	+6231-5931147
Website	its.ac.id



Head of Laboratory

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LABORATORY OF MATERIALS INNOVATION

Materials Department - ITS

Laboratory Activities

Our lab is promoting and conducting all learning, research and service activities mainly related to ideas and aspects of material innovation. Based on the fact, our lab is accredited as lab based education (LBE) lab by LPPM ITS since 2016 (based on decree 061238/IT2.11/TU.00.09/2016). Having the LBE status, our lab becomes frontier in materials research. In fact, our lab has been ranked as the 2nd best LBE lab in term of publication productivity by LPPM ITS (based on decree 010596/IT2.VII/TU.00.08/2018). In research, our lab focuses on biomaterials, polymers, composites and material modeling and simulations, while most of lecturers in our lab are also as reviewers for leading international journals. For students, our lab has become ANTASENA team home-base (ANTASENA is a prototype racing car utilizing hydrogen fuel. The team is fully supported by ITS Surabaya).

Facilities

Our lab has several interesting facilities and good environment for studying and research. Among others, the facilities are: i) extruder machine, ii) 3D printer, iii) hand truder, iv) tensile machine, v) mini TGA, vi) furnace, vii) compressor, viii) compaction for plastic and other digital equipments. Our lab has been also equipped with several safety equipments. There is a meeting room with WIFI connection as well.

Current Research and Project

Our lab has been awarded by several research grants to conduct research works in the fields of:

1. Frangible bullet: manufacturing and simulations
2. Bio-composite from hydro gel alginate
3. Management of plastic waste
4. 3D printing
5. Simulations of femur implant

Our lab is working together with famous hospital in Surabaya i.e. Dr. Soetomo hospital for biomaterials research.

General Information :

Departement	Materials Engineering
Faculty	Industrial Technology
Address	Department of Materials Engineering
Telephone	+62315997026
Website	material.its.ac.id, antasena.its.ac.id



Head of Laboratory

Mas Irfan P. Hidayat, PhD

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LABORATORY OF HYDRODINAMICS

Naval Architecture Department - ITS

Laboratory Activities

The Laboratory provides and serves activities on education and teaching, research, and S&T development, and public services in related fields. In term of research, in particular, the laboratory conducts resistance test for deep sea and shallow water condition, limited seakeeping test, and development of ship design using Computational Fluids Dynamics (CFD) approach.

Facilities

The laboratory possesses a towing tank for resistance test (with length of 50m, width 3m, and water depth 2m) and supported with maker to create regular and irregular waves for limited seakeeping test.

Current Research and Project

- Investigation into the physics and corrosion problem of vertical ocean current turbines for renewable energy (PI: Prof IKAP Utama)
- Seakeeping and sloshing analysis of tanker and LNG carrier vessels (PI: Dr A Sulisetyono)
- Observation into the effect of hull fouling on ship resistance, energy saving, and reduction of GHG (Prof IKAP Utama)
- Quality improvement and benchmarking of experiment tank test together with numerical/CFD validation (PI: Prof IKAP Utama)
- Development of Hull-Vane on semi-planning high-speed craft (PI: Dr K Suastika)
- An investigation into the use of foil on Hysucat/Hysuwac (PI: Dr K Suastika)
- On the prediction of current, wave and thermodynamics variables at Bay of Bohay, China using POM model and Opentelemac in comparison with buoy and satellite data (PI: Dr K Suastika)

General Information :

Departement	Naval Architecture
Faculty	Marine Technology
Address	Building W, 2nd Floor Kampus ITS Sukolilo, 60111
Telephone	+62 31 594 7254
Website	na.its.ac.id



Head of Laboratory

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LABORATORY OF PLANNING COMPUTATION AND SPATIAL PLANNING ANALYSIS

Urban and Regional Planning Department - ITS

Laboratory Activities

Laboratory of Planning Computation and Spatial Planning Analysis (LABKOM) is one of the laboratories in ITS that held the Lab-Based Education (LBE) certificate, which required LABKOM to conduct three main activities. First, LABKOM coordinates some lectures in the department. Second, LABKOM conducted researches based on the expertise of the members of LABKOM. Third, LABKOM is required to do community service to improve the livelihood and capacities of general public.

Aside from the mandatory activities mentioned above, LABKOM also provides trainings on software that are included in the department's curriculum, which are (ArcGIS, SPSS, PowerSIM, Wolram's Mathematica, and LANDUSESIM). The participants of those trainings were students, academics, professionals, and government's officials.

Facilities

LABKOM has two main facilities; The first one is the study room, where members of LABKOM and student can conduct research and held discussions among them. The second one is the computer room, where students can conduct their daily activities and trainings are held.

LABKOM also supported by the facilities owned by the Department of Urban and Regional Planning, which are the Library and Conference Room, among others.

Current Research and Project

Researches and Projects in LABKOM can be grouped into the following themes:

- Spatial Analysis and Land Use Modelling
- Disaster Risk Management and Reduction
- Urban and Regional Transportation Modelling
- Quantitative and Qualitative Analysis in Planning

General Information :

Departement	Urban and Regional Planning
Faculty	Architecture, Design, and Planning (FADP)
Address	Gedung PWK-Floor 3, Kampus ITS Sukolilo, Surabaya
Telephone	+62 31 5922425
Website	urplan.its.ac.id



Head of Laboratory

Cahyono Susetyo, M.Sc

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LABORATORY OF REGIONAL DEVELOPMENT, COASTAL AND ENVIRONMENTAL

Urban and Regional Planning Department - ITS

Laboratory Activities

Our laboratory is active in conducting teaching, research and community service. In terms of teaching this laboratory houses several subjects including regional planning, coastal planning, regional economics, sustainable development of tourism planning and rural planning subject.

For the road map of research and community service this laboratory focuses on Regional Disparities, Competition & Collaboration among Regions, Ecological Carrying Capacity, Disaster Management, Sustainable Coastal Development, Urban Rural Linkage, Urban Mobility and Tourism Development.

Facilities

The facilities provided by this laboratory including give the consultation or partnership on research and community service on Regional Disparities, Rural Planning, Urban Rural Linkage, Urban Mobility, Competition & Collaboration among Regions, Disaster Management, Ecological Carrying Capacity, Sustainable Coastal Development and Tourism Planning topics for students and campus partners (including NGO, Government and Society).

Current Research and Project

The laboratory is currently conducting research and community service regarding the Preparation of Food and Nutrition Action Plans in collaboration with GAIN (Global Alliance for Improved Nutrition), local economic development in Kampung Dolly together with all departments within the ITS, alleviation of slums in Keputih Sub District, Determination of the Ecological Sustainability Level of the GERBANGKERTOSUSILA Metropolitan Area in East Java, Mitigation of Greenhouse Gas Emissions in the Transportation Sector in the City of Surabaya as well as research and many others. In addition, the laboratory is also active in collaborating with partners to develop spatial plans in several districts / cities.

General Information :

Departement	Urban and Regional Planning
Faculty	Architecture, Design, and Planning (FADP)
Address	Lantai 2, Gedung A, Departemen Perencanaan Wilayah dan Kota, Kampus ITS
Telephone	+62 31 5922425
Website	pwk.its.ac.id



Head of Laboratory

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LABORATORY OF URBAN DEVELOPMENT AND DESIGN

Urban and Regional Planning Department - ITS

Laboratory Activities

Laboratory engaged in urban development and design by carrying out the objectives "Smart Urban Development and Design". The activities include learning, research and community service. To achieve that goals, we arrange the roadmap until 2020:

- 2016 : Media Learning and Socialization Media in Planning and Design
- 2017 : Urban 1.0 – Urban Behavior Data Base in Planning and Design
- 2018 : Urban 2.0 – Urban Behavior Data Base Model in Planning and Design
- 2019 : Urban 3.0 – Prototype Platform for Urban Planning and Design in Laboratory Scale
- 2020 : Urban 4.0 – Platform for Urban Planning and Design

Facilities

- Meeting Room
- Document of Urban Development and Planning
- Books of Reference about Urban Development Planning
- Mock-up Props (Lego)
- Whiteboard, etc

Current Research and Project

Research:

1. Integration of Smart Kampung Criteria towards Surabaya Smart City
2. Challenges, Issues and Dynamics of Urban Development: Management, Innovation and Guidelines in Urban Planning
3. Residential Development Guide through Mapping of Built and Non-Built Land in Settlement Areas (Developer Housing) and Empty Land based on Spatial Concepts in East Surabaya Area

Project:

1. Penyusunan Substansi Teknis Rancangan Peraturan Gubernur Program Konservasi Mata Air Umbulan 2018
2. Rencana Pemanfaatan Aset Eks Taman Harapan/ Kawasan Jl. Puter

General Information :

Departement	Urban and Regional Planning
Faculty	Architecture, Design, and Planning (FADP)
Address	2nd floor, A Building Urban and Regional Planning Departement
Telephone	+62 31 5922425
Website	pwk.its.ac.id



Head of Laboratory

Putu Gede Ariastita, ST., MT.

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LABORATORY OF DIGITAL CREATIVE MEDIA (DCM)

Visual Communication Design Department - ITS

Laboratory Activities

We are an Interdisciplinary Laboratory focuses on research, innovation, and interactive media: Our theoretical and practical approach addresses issues on Social and Cultural Issues, Innovation and change in the creative and digital industries, and changes in the art and creative practice and content. Research activities include the fields of computer animation, animation technology, board games, human and computer interaction design on health and education, mobile application development based on local culture content, augmented reality games and virtual reality, and cinematographic research

Facilities

Located in Visual Communication Design Department, our Lab equipped with digital, animation and editing software.

Current Research and Project

- Interactive Media for Young Learners in Ex-Red Light District Community
- UI for Institutional Websites (ITS Website Design and Development Team)
- Educational Boardgame towards National, Social, and Cultural Education
- UX Research in Medical Practice and Education

General Information :

Departement	Visual Communication Design
Faculty	Architecture, Design, and Planning (FADP)
Address	Gedung R, Jl. Desain Produk, ITS, Sukolilo Surabaya
Telephone	+62 31 5931147
Website	https://www.its.ac.id/dkv/



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THANK YOU



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