

# IEORD LABORATORIES AND FACILITIES



## HUMAN FACTORS AND ERGONOMICS LABORATORIES (HFEL)

The Human Factors and Ergonomics Laboratory (HFEL) studies how people interact with their environments, focusing on physical ergonomics to improve safety and well-being.



## KAIZEN AND INNOVATION MAKERSPACE (KIM)

Lab dedicated to research in the field of Quality, Lean Six Sigma, Kaizen and Operational Excellence.



## OPTIMIZATION LAB (IE Comp Lab)

Main computer lab with specialized software for academic and project use



## SUPPLY CHAIN & ANALYTICS LAB (SCAL)

Lab specializing in supply chain solutions, optimization, and analytics training

## INTEGRATED PRODUCT DESIGN & DEVELOPMENT LAB (IPDD)

Space for applied research & sustainable product design/development

## STUDENT SPACE

SWELL Room and IE-ME Student Spaces dedicated student spaces to rest, relax, study, and focus



## TRACKS OF SPECIALIZATION

### OPERATIONS RESEARCH

Operations Research (OR) is the application of scientific methods, techniques, and tools to problems involving the operations of a system so as to provide those in control of the system with optimal solutions to the problems. Its distinctive approach is to develop a mathematical model of a real world system, incorporating measurements of factors such as chance and risk with which to predict and compare the outcomes of alternative decisions, strategies and controls. The purpose is to help determine optimal policies and actions scientifically.

### PRODUCTION SYSTEMS

Production is the process by which goods and services are created. These processes are found in factories, offices, hospitals, supermarkets, etc. The production Systems (PS) is designed to equip students with specialized knowledge of modern industrial engineering principles and practices such as inventory management, service science, lean manufacturing and total quality management among others.

### HUMAN FACTORS AND ERGONOMICS LAB

Human Factors and Ergonomics (HFE) is the scientific study of human characteristics for the appropriate design of the living and work environment. It is concerned with ensuring that the work system is conducive to good performance and work effectiveness, and consequently that the work environment is compatible with the health, safety and comfort of the worker.

HFE incorporates applications of knowledge from various fields in the human sciences, and technology including anthropometrics, biomechanics, physiology, psychology, industrial design, information technology and industrial management.

### ANALYTICS SYSTEMS ENGINEERING

Analytics Systems Engineering (ASE) intends to provide the students with the concepts, tools and techniques in the analysis, design and implementation of manual and computer-based Analytics Systems. It relies heavily on the applications of computer and information technology as well as operations research.



## UNIVERSITY STUDENT SERVICES

#### 1. Libraries

Main Library  
Engineering Library I (Melchor Hall)  
Engineering Library II (Centennial Hall)

#### 2. Student Building Union

#### 3. Other Student Services

Diliman Learning Resource Center  
Office of Counselling and Guidance  
Office of Scholarships and Grants  
Office of Student Housing  
Office of Student Ethics  
University Food Service

To learn more about these, please visit the OVCSA website at

<https://ovcsa.upd.edu.ph/student-services/>



Visit our website for more info!



## DEPARTMENT OF INDUSTRIAL ENGINEERING AND OPERATIONS RESEARCH

## GRADUATE PROGRAMS PRIMER



# MISSION

The UP Diliman Department of Industrial Engineering and Operations Research commits itself to:

- Produce highly qualified industrial engineering professionals;
- Conduct progressive research and development, generating impactful solutions that advance IE practices and address real-world challenges; and
- Cultivate institutional linkages with industry, academia, and government facilitating knowledge exchange and innovation for national development and global advancement.

## VISION

“The Department of Industrial Engineering and Operations Research envisions itself to be the national institute of Industrial and Systems Engineering, globally recognized in providing world-class industrial engineering education, research and development, and service.”

## ABOUT GRADUATE PROGRAMS

### MASTER OF ENGINEERING IN INDUSTRIAL ENGINEERING

Master of Engineering degree is a non-thesis degree that is comprised of strong technical and business coursework, usually including internship or applied research experience. The program is intended for students aiming for careers in product and process design and development, and innovation in industry. Graduate students can pursue an applied project alongside a comprehensive exam using the concepts learned from the core and specialization courses that leads to a Masters of Engineering in Industrial Engineering (MEng IE) degree.

### MASTER OF SCIENCE IN INDUSTRIAL ENGINEERING

The Master of Science degree is generally a research degree consisting of advanced technical coursework and a thesis in a chosen discipline. It is designed for students with professional interests on research or technology development in academia, industry or government. Graduate students can have the option of writing a thesis that incorporates all core and specialization course topics that leads to a Master of Science in Industrial Engineering (MS IE) degree.

### DOCTOR OF PHILOSOPHY IN INDUSTRIAL ENGINEERING

The PhD in Industrial Engineering at University of the Philippines focuses on developing expert researchers in systems engineering, analytics, human factors, and operations research. It emphasizes a holistic approach, incorporating Industry 4.0, sustainability, and diverse student backgrounds. The program aims to produce top-tier scholars and professionals capable of solving complex real-world challenges through independent research and advanced methodologies.

## PROGRAM LEARNING OBJECTIVES

### MASTER OF ENGINEERING IN INDUSTRIAL ENGINEERING

- Demonstrate ability to manage people or projects involving the development and improvement of complex systems.
- Implement solutions of practical significance using modern and classical problem-solving methodologies as an applied contribution to existing knowledge.
- Demonstrate professional excellence and ethical conduct as an industrial engineer engaged in teaching, public service, research or in industry practice.

### MASTER OF SCIENCE IN INDUSTRIAL ENGINEERING

- Demonstrate expert knowledge of existing and state-of-the-art approaches in an area of specialization of industrial engineering.
- Develop research on methodologies in solving problems, as may be presented in research literature or in practice in the public and private sector.
- Implement research of practical significance using modern and classical problem-solving methodologies as an original contribution to existing knowledge.
- Demonstrate professional excellence and ethical conduct as an industrial engineer engaged in teaching, public service, research or in industry practice.

### DOCTOR OF PHILOSOPHY IN INDUSTRIAL ENGINEERING

The PhD in Industrial Engineering program focuses on engineering systems development, encompassing areas like analytics, human factors, and operations research. Its aim is to address the need for expert researchers and instructors in the Philippines, bridging disciplines to solve real-world challenges.

This program stands out by offering a holistic approach, catering to diverse student backgrounds, and aiming to produce top-tier scholars and professionals. It incorporates Industry 4.0 and sustainability training, enabling independent research and offering multiple completion pathways. Ultimately, it equips graduates with the skills to solve engineering problems using advanced research methods and frameworks, deepening their understanding of complex industrial systems.

