AIT
Asian Institute of Technology

# ASIAN INSTITUTE OF TECHNOLOGY

# ‘PROFESSIONAL MASTERS’ PROGRAMS

## ABOUT AIT

Founded in 1959, the Asian Institute of Technology (AIT) is an international English-speaking postgraduate institution, focusing on advanced engineering and science, sustainability, climate change, development studies and management studies. AIT's rigorous academic, research, and experiential outreach programs prepare graduates for professional success and leadership roles in Asia and beyond.


## KEY FEATURES OF AIT'S PM PROGRAMS

- Designed specifically for executives and managers to fit around work schedules.
- Provides a deep, practical learning experience using a unique 12-month design (some of the programs are offered over a longer timespan).
- Optimizes the time that busy professionals can devote, allowing them to learn while continuing to work.

## WHAT IS A PROFESSIONAL MASTERS PROGRAM AT AIT?

The Professional Masters (PM) is an innovation pioneered by AIT. It is a one-year master's degree that is taught in a flexible manner and is designed for working professionals who can largely learn outside of work hours. AIT has 10 PM programs that span our core areas, such as business and entrepreneurship, analytics and data science, disaster preparedness and mitigation, structural engineering and environment and sustainable development.


- Empowers graduates with an internationally recognized AIT degree.
- Delivered a blend of innovative tools and techniques that vary by program.

All PM programs are taught by teaching teams comprising academics and practitioners. Academic faculty provides a solid foundation of relevant theories and frameworks. Professional practitioners with teaching experience add a crucial practical dimension to the program. Participants are experienced, industry professionals from across the region. The requirement for entry is a recognized bachelor's degree, which may be waived for suitably experienced professionals. English language proficiency is necessary.


DATA
SCIENCE

**In more than 10 years since PMs were launched, AIT has created several offerings to cater to the needs of various categories of professionals. Currently we offer the following 10 Professional Master Programs across the Institute:**

1. Disaster Preparedness Mitigation & Management (DPMM)
2. Structural Design of Tall Buildings (PMTB)
3. Project Management with specialization in Construction Project (MPM)
4. Geotechnical Engineering and Management (PME-GEM) and Geosystem Exploration and Petroleum Geoengineering (PME-GEPG)
5. Data Science (DS)
6. Environment and Sustainable Development (ESD)
7. Banking & Finance (BF)
8. Business Analytics & Digital Transformation (BADT)
9. Environment, Social and Governance (ESG)
10. Yunus Masters in Social Business and Entrepreneurship (YM-SBE)

## ELIGIBILITY REQUIREMENT

To be eligible for admission to the regular Masters program, an applicant must:

1. Hold a bachelor's degree (normally from a four-year program), or its equivalent, in an appropriate field of study from an institution of good standing acceptable to AIT;
2. Have undergraduate grades significantly above average.
3. The minimum GPA requirement for admission to the Masters Program is 2.75 or equivalent, at the Bachelor degree level;
4. English Proficiency Requirement: AIT-EET:6 or IELTS-Academic:6 (writing 6) or TOEFL Paper: 550 (writing 59-61) or TOEFL CBT: 213 (writing 25-26): TOEFL IBT: 80 (writing 21-23);
5. For the PM degree program, in addition to the above-mentioned eligibility requirements, an applicant must: have at least 3 years of work experience in areas related to the academic program at AIT and be executives in organizations/companies.
6. Be in satisfactory physical and mental health.
7. Satisfy English requirement by AIT.

## ADMISSION REQUIREMENTS

- A complete AIT application form.
- A certified copy of undergraduate certificate (in English).
- A certified official student transcript (in English).
- Two (2) letters of recommendation.
- A certificate of English language proficiency.

**APPLY FOR PROGRAMS AT AIT PLEASE VISIT:**
**https://admission.ait.ac.th/**

1

# DISASTER PREPAREDNESS MITIGATION & MANAGEMENT (DPMM)

MORE INFORMATION, PLEASE WRITE TO US:
**dpmm@ait.ac.th**

## PROGRAM OVERVIEW

DPMM program uses interdisciplinary capacities (engineering, medicine, natural and social science, as well as management) to manage and minimize the effects of disasters in people on the front lines of disaster response and preparedness. It provides professional education and short-term training for the capacity building of the Asia-Pacific as well as neighboring regions.

This program offers a balanced curriculum of physical and social sciences and engineering aspects of disaster risk management. Students and graduates are trained to acquire knowledge and skills to utilize innovative tools and techniques to come up with sustainable solutions to the increasing local, regional, and global scale of disaster risk management.

## COURSES OFFERED

**Required courses**: Disaster risk management and governance, Community Based Disaster Risk Reduction and Management - Theory and Practice, Managing Disasters.

**Elective courses**: Climate Hazards and Early Warning Systems, Floods and Droughts, Mitigation of Earthquake Disasters, Coastal Processes, Risk and Resilience, Remote Sensing and GIS for Disaster Mitigation, Multi-hazard Risk Assessment: Methods, Tools, and Techniques, Economics of Disasters, Human Conflicts and Humanitarian Emergency Management.

## DELIVERY MODE & OTHER FEATURES

The program is delivered using a combination of methods such as interactive self-learning, live classroom, face-to-face classroom in AIT campus.

The minimum entry requirement for this degree is a bachelor's degree from a recognized university.

Total credit requirement of this program is 30 credits which include 24 credits of coursework and 6 credits of special Study or internship. It is a 12 months' academic program distributed in 2 semesters.

2

# STRUCTURAL DESIGN OF TALL BUILDINGS (PMTB)

MORE INFORMATION, PLEASE WRITE TO US:
**pmtb@ait.ac.th**

## PROGRAM OVERVIEW

PMTB is a flexible learning approach combining online and in-class aspects of learning. The program is designed keeping in view the recent dominance of tall building projects and the need for engineers to be equipped with better tools and skill sets to design safer structures. The focus of the program includes advanced knowledge on state-of-the-art methodologies, techniques, and tools that can be applied in structural design of tall buildings. Developing your design and leadership skills to formulate innovative systems and solutions, on the job learning wherein the student can benefit from experiential learning by doing a variety of assignments, aligned with the students' existing professional commitments.

## COURSES OFFERED

**Required courses**: Design of Tall Buildings, Structural Dynamics, Earthquake Engineering for Tall Buildings, Wind Engineering for Tall Buildings, Geotechnical Engineering for Tall Buildings, Construction Technology and Management for Tall Buildings, Performance Based Seismic Design, Design of RC Components, master projects.

**Elective courses**: Structural Health Evaluation and monitoring of buildings, Ground Improvement Techniques, Computer Methods in Structural Analysis, Communication Skills for Engineers, and Special Study.

*Note: A PMTB student should choose from the above pool of courses (required & elective) to meet the requirement of fulfilling the 30 credits in completing the program.*

*View detailed course description: https://solutions.ait.ac.th/pmtb/overview/*

## DELIVERY MODE & OTHER FEATURES

Online: AIT Share – AIT's in-house online learning platform

In-class: in-person interaction with faculty, guided visits to tall building projects, final exams.

Field visit: visit on-going tall building construction projects to get insights from design concepts into practice.

Program Duration: Unlike regular 1 Year PM programs, AIT PMTB Program requires the enrolled students to complete 30 credits in 2 years to 5 years to receive a PMTB degree certificate.

### TESTIMONIALS

**Thuc Bui Tri**
Associate Director - Structural Engineering, Red Sea Global, Saudi Arabia

"PMTB has been a transformative journey that equipped me with unparalleled expertise in crafting the future skyline. The program's rigorous curriculum and exceptional faculty nurtured my understanding of structural design, enabling me to confidently shape the world's tallest marvels. Grateful for the PMTB experience, which now defines my success in the realm of tall buildings."

3

# PROJECT MANAGEMENT WITH SPECIALIZATION IN CONSTRUCTION PROJECT (MPM)

MORE INFORMATION, PLEASE WRITE TO US:
**mpm@aitcv.ac.vn**

## PROGRAM OVERVIEW

This PM in Project Management (with specialization in Construction Project) aims to provide applied and advanced project management knowledge to professionals working in large scale construction projects. Students may choose to either specialize in Construction Engineering and Management (CEM) or Infrastructure Management (IM). Construction Engineering and Management covers advanced project management approaches to finance, plan, design, construct, monitor and control construction projects. This master's degree program emphasizes in-depth construction project management approaches Infrastructure Management focuses on the processes necessary for the planning and development of new infrastructure, and on maintaining and operating mature infrastructure for sustainability. A wide variety of management topics are covered.

## COURSES OFFERED

**Require courses**: Organizational Management in Construction, Integrated Project Planning and Control, Communication and Negotiation skills for Project Managers, Project Cost and Financial Management, Safety and Health Management in Construction, Legal and Contractual Risk Management, Project Financing.

**Elective courses**: Applied Project Management in Power-Plant Projects, Applied Project Management in High Rise Building Projects, Applied Project Management in Housing and Real Estate Projects, Applied Project Management in Commercial Projects, Applied Project Management in Public Infrastructure, Applied Project Management in Construction Business and Project Simulation.

## DELIVERY MODE

AThe program will be delivered onsite in the AIT Vietnam campus during 1 year of full time studying, and in every weekday evening from 18:00-21:00, and Saturday from 9:00 – 12:00 & 13:30 – 16:30. Hybrid mode is available for those who are not able to join on-site.

### TESTIMONIALS

**Mr. Nghiem Xuan Hung**
General Director of Internal Affairs, Pacific Group

"The program helps me broaden my vision and make better decisions in management. The faculty comes from many different countries and were always enthusiastic in the teaching process. In particular, the lecturers have extensive teaching experience, and the learning content is very well combined with reality and capable directly to the economic environment in Vietnam as well as other countries.

In addition, the program has provided theoretical foundations for interdisciplinary management along with updating modern development trends in the world in the fields of business administration and project management. I feel satisfied and worthy of what MPM brought and would like to thank the lecturers for their continued support throughout the school year."

4

# GEOTECHNICAL ENGINEERING AND MANAGEMENT (PME-GEM) AND GEOSYSTEM EXPLORATION AND PETROLEUM GEOENGINEERING (PME-GEPG)

MORE INFORMATION, PLEASE WRITE TO US:
**arivut@ait.ac.th**
**supamas@ait.ac.th**

## PROGRAM OVERVIEW

The Professional Master of Engineering in Geotechnical Engineering and Management (GEM) started in the early of 2000s to develop strong, reflective, and responsive engineering professionals who can confidently adapt to the challenges and opportunities of this rapidly changing world. These programs are offered outside the Bangkok campus and tailored to accommodate working professionals seeking to advance their careers while continuing their jobs.

These programs offer various specializations, including Geotechnical Engineering and Management (GEM) and Geosystem Exploration and Petroleum Geoengineering (GEPG). These specializations cover a wide range of essential topics, including sire investigation, soil characterization, soil improvement techniques, tunneling in soft ground, foundation design, computational geotechnics, and the mitigation of geo hazards, mineral resources, petroleum exploration and production, nearshore reclamation among other critical subjects.

## COURSES OFFERED

**PME-GEM**: Practical Soil Engineering, Foundation Engineering and Design, Engineering Geology, Instrumentation and Advanced Soil Testing, Ground improvement & Geosynthetic's, Underground Excavation and Tunneling, Geotechnical Investigation & Exploration, Risk Management for Infrastructure Development and Planning, Challenges in Applying Engineering Principles in Practice.

**PME-GEPG**: Fundamentals of Geosystem Exploration, Petroleum Reservoir Engineering, Drilling and Well Completion Operation, Devision Analysis and Risk Management in Oil and Gas Industry, Workflow of Oil Gas Operations in E&P, Exploration Geophysics, Petrophysics, Petroleum Production Engineering, Petroleum Geochemistry.

## DELIVERY MODE & OTHER FEATURES

The program will be delivered onsite in the AIT Vietnam campus during 1 year of full time studying, and in every weekday evening from 18:00-21:00, and Saturday from 9:00 – 12:00 & 13:30 – 16:30. Hybrid mode is available for those who are not able to join on-site.

Students will need to complete a 33-credit curriculum, consisting of 24 credits of course work and 9 credits of internship in one year period. Teaching is conducted in English.

### STAR LECTURER PROFILE

**Ass.Prof. Avirut Puttiwongrak**

Ass.Prof.Avirut Puttiwongrak received his Ph.D. in Environment and Resource System Engineering from Kyoto University in 2013. Dr. Avirut is currently an assistant professor at the Asian Institute of Technology, where he teaches an introductory Engineering Geology course as well as graduate courses in subsurface engineering and geo-environment. Dr. Avirut's current research interests include groundwater exploration; groundwater modeling; groundwater resource assessment; subsurface pollution monitoring and evaluation; $CO_2$ sequestration; Geo-data analytics studies; and laboratory-scale geohazard investigations.


5

# DATA SCIENCE (DS)

MORE INFORMATION, PLEASE WRITE TO US:
**pmds@ait.ac.th**

## PROGRAM OVERVIEW

Data science is concerned with the extraction of useful knowledge from data sets. It is closely related to the fields of computer science, mathematics, and statistics. It is a relatively new term for a broad set of skills spanning the more established fields of machine learning, data mining, databases, and visualization, along with their applications in various fields. In 2012, Harvard Business Review called data science "The Sexiest Job of the 21st Century."

The program is designed for working professionals with a background in ICT who would like to extend their skill set to encompass data science and become qualified experts in the principles and practices of data science.

## COURSES OFFERED

**Required courses**: Computer Programming for Data Science, Data Modeling and Data Management, Fundamentals of Machine Learning, Mathematical Foundations of Data Science, Business Intelligence and Analytics for Professionals.

**Elective courses**: Data Driven Computer Vision, Deep Learning for Professionals, Human-Computer Interaction for Professionals, Data Governance: Strategies, Infrastructure and Framework, Industrial Project.

## PROGRAM DURATION, DELIVERY MODE & OTHER FEATURES

The program takes place outside of regular working hours, specifically on weekends and evenings. Most students complete the program in 20 months given the technical nature of the courses and intensity of hands-on sessions and the time it takes to complete the end-of-program project.

The program employs a diverse set of teaching methods, including in-person classroom sessions at both the AITVN in Hanoi and Ho Chi Minh City Campuses together with live online classes. The curriculum emphasizes interactive hybrid learning, complemented by hands-on practical sessions and project-based instruction across all courses. Additionally, the program offers two immersive field trips: to AIT's main campus and/or to selected companies/ organizations in Thailand that have successfully implemented advanced data science and AI technologies to address practical industrial challenges. These visits provide participants with valuable exposure to real-world solutions in action.

6

# ENVIRONMENT AND SUSTAINABLE DEVELOPMENT (ESD IN VIETNAM)

MORE INFORMATION, PLEASE WRITE TO US:
**agnes@ait.ac.th**

## PROGRAM OVERVIEW

Although many efforts on sustainable environmental management while fostering economic growth have been globally and regionally made, environmental policy makers, managers and practitioners still struggle to find out sustainable approaches for environmental development management. This Professional Master Program in Environment and Sustainable Development aims to train the professionals with a primary interest in the linkages between development economics and environmental management from the multidisciplinary approaches. Students are expected to gain essential knowledge, instruments, skills, and techniques for making developmental practices more sustainable without compromising the environmental integrity and human health.

## COURSES OFFERED

Public Management, Development Finance, Development Economics, Air Quality Management, Environmental Economics, Water Pollution Management, Environment and Development, Urban Resilience Assessment, Policy and Economic Analysis, Rural and Regional Development, Green Financing for Sustainability, Gender and SMEs in the Global Economy, Gender Analysis & Health Policy Research, Hazardous Waste Technology and Management, Development Project Planning and Management, Geospatial Techniques for Development and Environment.

## DELIVERY MODE

The program is conducted during non-working hours (weekends and evenings). Language of Instruction is English. Students will study in Vietnam and study tour to Thailand.

### STAR LECTURER PROFILE

**Ass.Prof.Nguyen Thi Phuoc Lai**

Ass.Prof.Nguyen Thi Phuoc Lai is an environmental social scientist. Her research crosses beyond conventional social science disciplinary and integrate interdisciplinary aspects to address the complexity and uncertainty that challenge development planning. It centers upon understanding human dimension in planning and management of the environment regarding social attitudes, epistemological processes, and behaviors of how to understand, mitigate and adapt to social environmental changes. Specific areas of interest are coupled human-environment complex systems, social environmental changes, institutions and governance of socio-ecological systems, STEM education and innovation for sustainable development

7

# BANKING & FINANCE

MORE INFORMATION, PLEASE
WRITE TO US:
**som_pm@ait.ac.th**

## PROGRAM OVERVIEW

PMBF helps emerging industry leaders cultivate a strategic mindset to meet current and emerging challenges arising from the fast-changing business and technological environment in the banking and finance industry. The program will help participants acquire knowledge and tools to decode and respond strategically to significant changes in the economic and social environment, analyze and design new business models to gain a competitive edge, identify emerging revenue streams analyzing the role of partnerships in value creation for customers anticipate and respond to evolving regulations and exploit the potential of technology to enhance the competitiveness of business.

## COURSES OFFERED

**Required courses**: Macro Economics, Financial Management, Strategy & Leadership, International Finance, Banking, Financial Regulation & Supervision, Risk Management, Capstone project.

**Elective courses**: Opportunities and Challenges, Digital Transformation: Making it work in banks, Introduction to Business Analytics.

## DELIVERY MODE

The program is delivered using a combination of methods such as interactive self-learning, live classroom, face-to-face classroom in AIT campus. Each course (except the integrative module) will be delivered over 3 to 4 weeks. The program will attempt to provide options for participants to attend all or part of the integrative module on campus, considering the participants' work schedules.

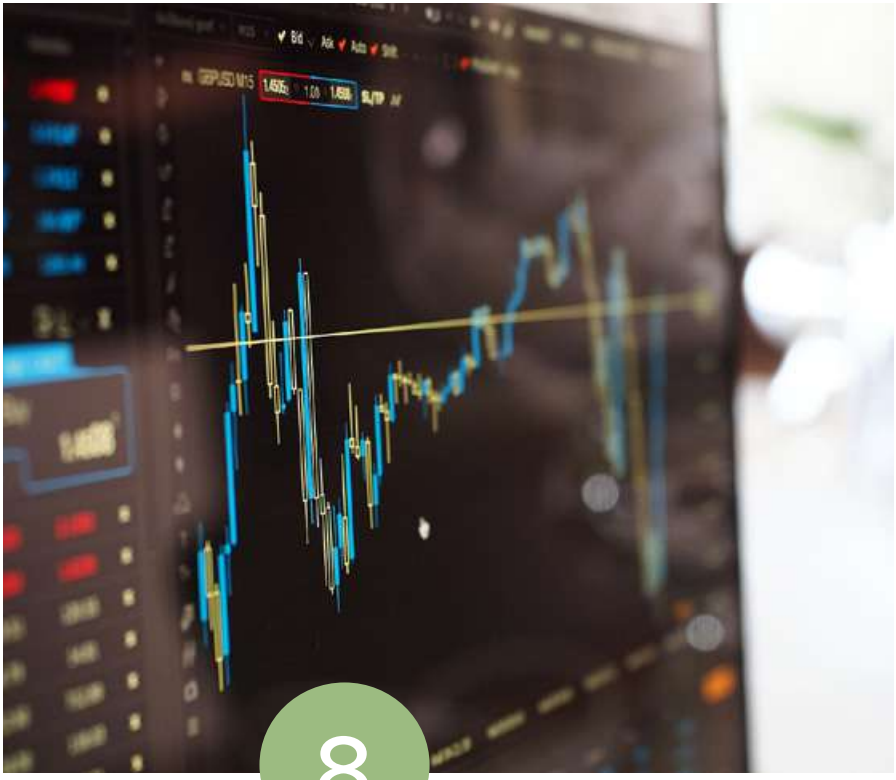
## TESTIMONIALS

**Mr. Aditya Rijal**
Credit Risk Officer, NMB Bank Ltd, Nepal

" As a student of PMBF, I gained an understanding of banking and finance from both the local and global perspectives. My networking with fellow bankers from Nepal and Sri Lanka was deepened during study which shall obviously be beneficial for my career in the future. The variety of subjects included in the course and the richness in terms of the diversity of faculty members was exceptional. Thailand treated me well during my two weeks of stay."

**Mr. Arbin A.C**
Branch Manager, Milan Chowk, Butwal, Rupandehi, Nepal

"PMBF from AIT has been a transformative experience for me. The comprehensive curriculum, delivered by highly knowledgeable and experienced faculty, provided me with a deep understanding of the intricacies of the banking and finance industry. The coursework was well-structured, covering a wide range of topics including Financial Management, Risk Assessment, Strategy & Leadership, and Banking Regulations with practical learning. The program also emphasized the application of cutting-edge technologies and innovative practices in the financial sector, equipping me with the skills necessary to thrive in the digital age with focused in case study and group projects.I passionately recommend the PMBF program at AIT to anyone pursuing to enhance their career prospects in the banking and finance industry. It has provided me with a solid foundation to excel in my professional journey"



8

# BUSINESS ANALYTICS & DIGITAL TRANSFORMATION (BADT)

MORE INFORMATION, PLEASE WRITE TO US:
**som_pm@ait.ac.th**

## PROGRAM OVERVIEW

PM BADT aims to empower professionals in the analytics and transformation domain with strategic thinking to meet current and emerging challenges arising from the fastchanging business and technological environment in the data and analytics domain.

## COURSES OFFERED

The business of frontier technology, Big data analytics, Developing Leadership Skills in the Digital Workplace, Agile Thinking for Digital Transformation, Digital Marketing & Consumer Analytics, Industry 4.0, Global Data Management, Change Management and a capstone project that completes the program.

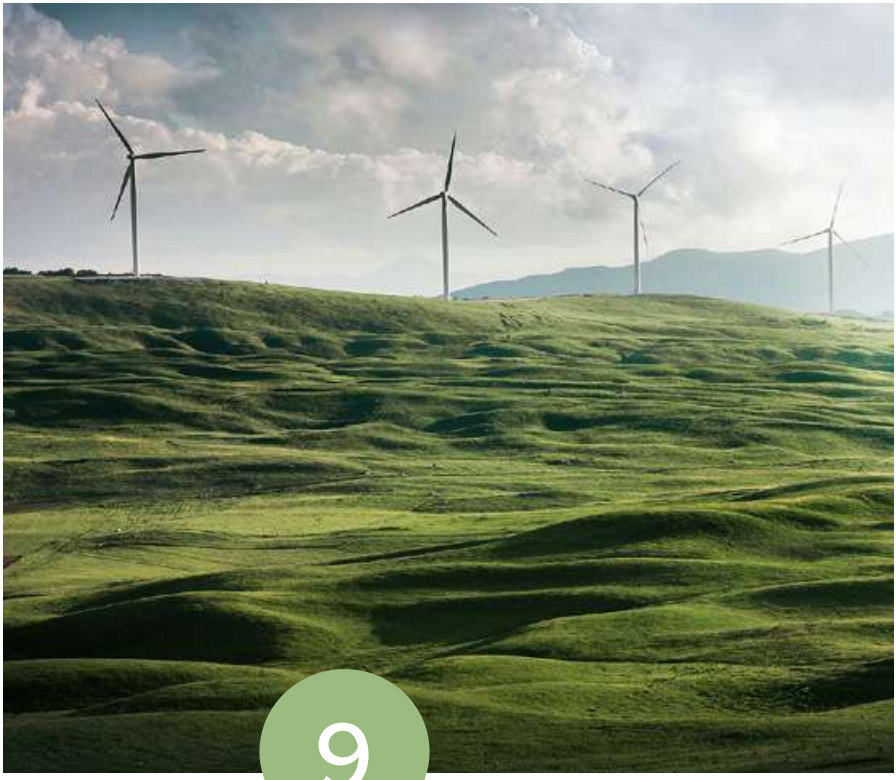
## DELIVERY MODE

The program will be delivered using a combination of methods such as interactive self-learning, live classroom, face-to-face classroom in AIT campus. Each course (except the integrative module) will be delivered over 3 to 4 weeks. The program will attempt to provide options for participants to attend all or part of the integrative module on campus, considering the participants' work schedules.

### TESTIMONIALS

**Phan Minh Triet**
Business Development Manager, Xcolla

"As a part of the first batch of PM BADT Program in AIT Vietnam, I gained comprehensive skills in business analytics and digital transformation. The program's practical focus and flexible study options allowed me to drive successful change in the organizations I have been involved in. Networking with industry leaders and accessing an international alumni network of over 25,000individuals opened doors to the new opportunities and fostered a modern mindset and leadership transformation"



9

# ENVIRONMENT, SOCIAL AND GOVERNANCE (ESG)

MORE INFORMATION, PLEASE WRITE TO US:
**som_pm@ait.ac.th**

## PROGRAM OVERVIEW

PMESG aims to develop a new generation of ESG managers capable of tackling Environment, Social and Governance challenges posed by a rapidly changing global business environment, from a risk-management perspective. When launched in 2011, it was among the first professional qualifications in the region. Completely updated in 2023 in line with current discourse and best practice, PMESG is jointly offered with the Yunus Center at AIT.

PMESG graduates will emerge with a deeper understanding of the prevailing ESG context, an improved working knowledge of ESG frameworks and tools, practical experience of building ESG solutions relevant to their own work environment, and a global peer network, ready for leadership positions.

## COURSES OFFERED (ALL 8 ARE CORE)

Corporate Government, Fair Operating Practices & Regulations; ESG Value Chain Risk Management; Environmental Management & Climate Change; Social Enterprise, Community Investment & Enterprise-Led Development; HRM - Diversity & Inclusion; ESG Investing & Climate Finance; Innovation & Future of ESG; ESG Scenario Planning & Trend Analysis; ESG Practicum and Final Project.

## DELIVERY MODE

PMESG is designed for the regional mobile working professional. A module is offered every month, with classes on two consecutive weekends. Students benefit from AIT's hybrid multi-modal teaching model that combines online and in-class instruction with extensive practical exposure.

## STAR LECTURERS FROM INDUSTRY

### Ms. Harsh Saini

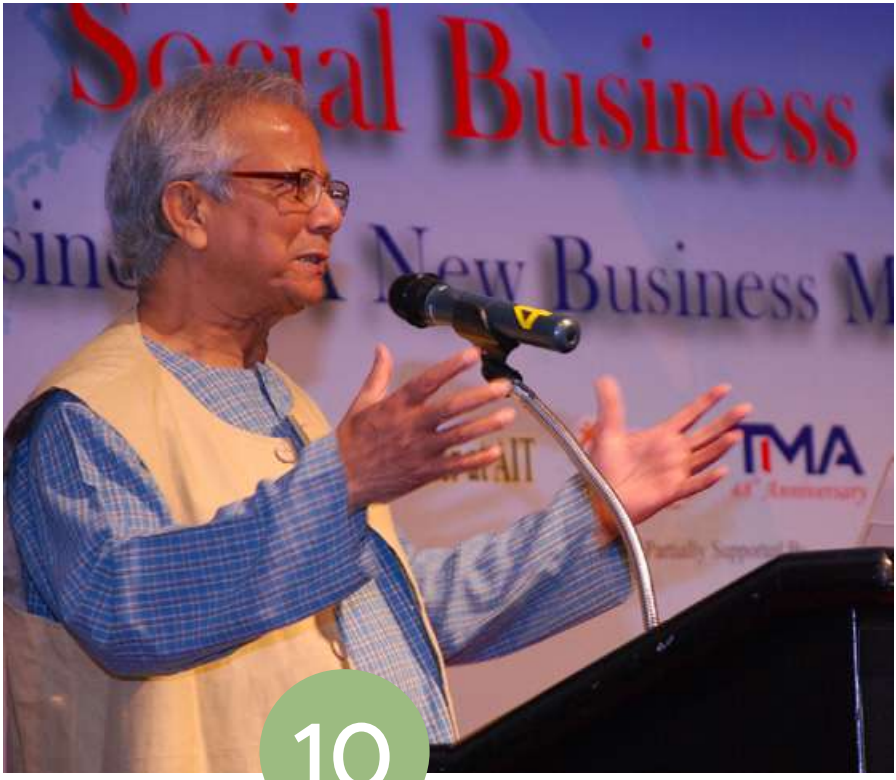
- Global Supply Chains Expert
- Former EVP and Group Head for Sustainability, Fung Group
- CSR Director, Nike Inc.; The Body Shop

### Mr. David Galipeau

- Partner, SDGx Singapore
- Director, SDGx Near Future Lab
- Lecturer, United Nations System Staff College
- Lecturer, School of Management, Asian Institute of Technology
- Lecturer, School of Integrated Innovation, Chulalongkorn University

### Mr. Tim Edmunds

- Partner, Sustainability Strategy and Transformation, PWC China and HK
- Former Director Supply Chain Consulting, Weave Services Ltd.
- Adjunct Faculty, School of Management, Asian Institute of Technology




10

# YUNUS MASTERS-SOCIAL BUSINESS AND ENTREPRENEURSHIP (YM-SBE)

MORE INFORMATION, PLEASE WRITE TO US:
**yunusmasters@ait.asia**

## PROGRAM OVERVIEW

YPM is a one-of-a-kind program co-offered with the Yunus Center at AIT. Visualized by Nobel-winning thought-leader, Muhammad Yunus, it equips mid-career professionals, transitioning executives, and aspiring entrepreneurs for impact-driven careers in the corporate, public, or citizen sectors.

## COURSES OFFERED

**Required courses**: Entrepreneurship & New Ventures; Development & Sustainability; Managerial Economics; Community Development Planning; Project Management; Practicum; Social Business Design Sandbox.

**Elective courses**: Development Policy & Practice; Gender, Enterprise & Organizations; Development Economics; Natural Resource Economics; Strategy & Corporate Sustainability; Leadership; Corporate Finance; Service Marketing; NGO Management; Data Analytics; Social Impact Assessment.

## DELIVERY MODE

YPM bridges high-demand areas in Business and Sustainability through its unique Social Business Practicum and Sandbox, which requires students to design and test a viable social enterprise as their final project. The highly personalized Practicum is offered by Yunus Center AIT and the Yunus Academia Network, with 4 Masterclasses by Professor Muhammad Yunus.

## STAR LECTURER PROFILE

**Professor Muhammad Yunus**

- Economist, social innovator, and entrepreneur
- Nobel Peace Prize 2006, "Father of Social Business"
- Pioneer of large-scale microfinance as poverty alleviation approach
- Former Chancelor, Glasgow Caledonian University
- Chancelor of Albukhary International University
- Founding co-chair, Yunus Center at AIT
- Author, "A World of 3 Zeroes: Zero Poverty, Zero Unemployment, and Zero Net Carbon Emissions"

## TESTIMONIALS

**Qasim Javaid**
Founding CEO, Rizq
(YPM 2022)

"Rizq started with a lofty goal: To alleviate hunger by turning unsold foodstuff into nutritious and affordable meals. My final project for the Yunus Masters has made it a reality. Today, supplied by leading food brands, Rizq's mega-kitchen prepares thousands of meals every day, distributing them through our food cart franchise run by micro-entrepreneurs. This is Social Business at work. And being taught by Professor Yunus and peer exchanges across 106-university Yunus Center network makes for a life-changing opportunity."

Discover AIT in 360 °

**www.ait.ac.th**