AIT
Asian Institute of Technology

ASIAN INSTITUTE
OF TECHNOLOGY

PROSPECTUS

AIT

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WELCOME TO THE ASIAN INSTITUTE OF TECHNOLOGY

The Asian Institute of Technology (AIT) is an international English-speaking postgraduate institution, focusing on engineering, environment, and management studies.

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About AIT

Established Legacy and Vision

AIT is a leading international institution dedicated to advancing technological and sustainable development in Asia. Founded in 1959, AIT has a long-standing reputation for excellence in research, education, and innovation.

Global Reach and Diverse Community

AIT is home to a vibrant community of students, faculty, and staff from over 40 countries. This diversity fosters a rich cultural exchange and a global perspective, preparing our graduates to excel in an interconnected world.

Academic Excellence through innovative programs and research with a global impact

Innovative Programs

AIT offers a wide range of graduate programs across three schools:

- School of Engineering and Technology (SET)
- School of Environment, Resources and Development (SERD)
- School of Management (SOM)

Our programs are designed to meet the evolving needs of the industry and society, emphasizing interdisciplinary approaches and hands-on learning.

There are many different types of programs, and this Prospectus focuses on the Master's programs within each School. Every program listed here also has doctoral students who join via the Ph.D. (includes DBA in the School of Management). Some of those students and alumni highlighted below graduated as doctoral students.

The Master's program is often offered as a one or two year basis and with teaching via live classes where students join in person or via Zoom. Both of these offerings vary program-by-program and the main mode is a two year program that runs at the AIT campus.

AIT also offers 'Professional Master's' programs to experienced professionals.

Explore these programs in detail here:
https://ait.ac.th/study/professional-masters-programs/

AIT also offers short course training programs (for one day to weeks). AIT Extension is the Center most associated with these programs and the details are available here:
https://extension.ait.ac.th/
https://ait.ac.th/centre/ait-extension/

World-Class Faculty

Our faculty members are distinguished experts in their fields, bringing a wealth of knowledge and practical experience to the classroom. They are dedicated to mentoring students and conducting research that addresses critical global challenges.

Cutting-Edge Research

AIT is at the forefront of research in areas such as climate change, renewable energy, water resources management, and sustainable infrastructure. Our state-of-the-art facilities and collaborative research centers enable groundbreaking discoveries and practical solutions.

The Asian Institute of Technology has significantly shaped the development of infrastructure, energy, agriculture, and water management in Asia through its cutting-edge research, innovative projects, and extensive capacity-building initiatives. Its contributions have led to the advancement of sustainable practices and technologies that address the region's unique challenges and opportunities. The main thrust of AITs research themes are in Climate Change, Smart Communities, Food-Energy-Water, Infrastructure, and Technology-Society-Policy (for further details please see https://ait.ac.th/research-themes/).

Some notable research projects and initiatives by AIT related to these fields are:

1. Sustainable Urban Infrastructure: AIT has been involved in several projects aimed at promoting sustainable urban infrastructure. This includes the development of smart cities, with research focusing on green building technologies, urban planning, and sustainable transportation systems.

2. Disaster-Resilient Infrastructure: AIT has conducted extensive research on creating infrastructure resilient to natural disasters. This involves the use of advanced materials, innovative construction techniques, and early warning systems to mitigate the impacts of earthquakes, floods, and other natural calamities.

3. Renewable Energy Technologies: AIT has been a leader in research on renewable energy sources such as solar, wind, and biomass. Projects have included the development of more efficient solar panels, wind turbines, and bioenergy production methods.

4. Energy Policy and Management: The institute has also worked on creating effective energy policies and management strategies to promote sustainable energy use in Asian countries. This includes studies on energy efficiency, energy access, and the integration of renewable energy into national grids.

5. Sustainable Agriculture Practices: AIT's research in agriculture focuses on sustainable farming techniques that improve productivity while minimizing environmental impact. This includes projects on organic farming, integrated pest management, and conservation agriculture.

6. Agro-Technology Innovation: The institute has been at the forefront of developing and promoting new technologies in agriculture, such as precision farming, remote sensing, and the use of drones for monitoring crop health and managing resources efficiently.

7. Integrated Water Resources Management: AIT has conducted extensive research in this area, promoting the coordinated development and management of water, land, and related resources to maximize economic and social welfare without compromising the sustainability of vital ecosystems.

8. Flood and Drought Management: The institute has led projects aimed at improving flood and drought management across Asia. This includes the development of early warning systems, flood forecasting models, and drought-resistant crop varieties.

9. Water Supply and Sanitation: Research at AIT has also focused on improving water supply and sanitation in rural and urban areas. Projects have included the development of low-cost water purification systems and innovative waste management solutions.

10. Regional Integrated Multi-Hazard Early Warning System: AIT collaborates with RIMES to enhance the capacities of Asian countries in disaster risk reduction through improved early warning systems and climate services.

11. Clean Energy for Green Asia: A comprehensive program that encompasses research, capacity building, and outreach activities to promote clean energy technologies and sustainable development practices in the region.

12. Climate Change and Adaptation: AIT's research includes studying the impacts of climate change on various sectors and developing adaptation strategies to mitigate adverse effects, particularly in agriculture and water resources management.

13. AIT is also known for its cutting-edge research using AI and big data analytics. Some examples are below:

    - AI for Smart Cities: Research involves using AI to optimize urban planning, enhance public safety, and improve resource management in smart cities.
    - Traffic Road Safety: Intelligent Transportation Systems: Research focused on integrating AI and data analytics to improve traffic management, reduce congestion, and enhance road safety. This includes using real-time data from sensors and cameras to predict and mitigate traffic accidents.
    - Health: Telemedicine and Remote Health Monitoring: Projects focused on leveraging AI and IoT technologies to enhance telemedicine services and remote patient monitoring, particularly in underserved areas.

Industry Collaboration

We maintain strong partnerships with leading industries, governments, and international organizations. These collaborations provide students with unique opportunities for internships, projects, and career advancement.

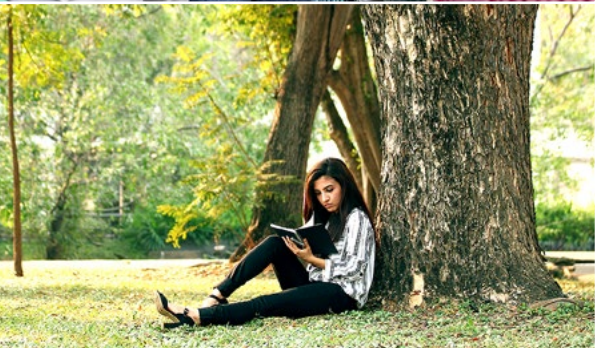
Campus Life

Dynamic Environment

AIT's beautiful main campus in Thailand offers a stimulating environment for academic and personal growth. Students benefit from modern facilities, including advanced laboratories, a comprehensive library, and residential accommodations.

Extracurricular Activities

We encourage students to engage in various extracurricular activities, from sports and cultural events to community service and leadership programs. These activities enhance the AIT experience and foster well-rounded development.



Alumni Network - Global Impact

Our alumni network spans the globe, with graduates holding influential positions in academia, industry, government, and non-profits. AIT alumni are known for their leadership, innovation, and commitment to sustainable development.

Join AIT

Admissions

We welcome applications from motivated individuals who are eager to make a difference. Our admissions process is designed to identify talented students who will thrive in AIT's rigorous academic environment.

Scholarships and Financial Aid

AIT offers a variety of scholarships and financial aid options to support students in their educational journey. We are committed to making education accessible to deserving candidates.

Contact Us

For more information, please visit our website: www.ait.ac.th

Email: admissions@ait.ac.th

Phone: +66 (0)2 524 5000

Follow us on social media:

Facebook: [AIT] (https://www.facebook.com/AITasia/)

X: [@AIT] (https://twitter.com/aitasia)

LinkedIn: [Asian Institute of Technology] (https://www.linkedin.com/school/ait-asia/)

SCHOOLS & OUTREACH CENTERS

- Our Three Schools
- Specialized applied research and outreach centers

Our Three Schools

The School of Engineering and Technology

The School of Engineering and Technology (SET) offers a diverse range of graduate, and doctoral programs, with expertise in fields such as Civil and Infrastructure Engineering, Information and Communication Technologies, and Environmental Engineering. Our state-of-the-art facilities and strong industry partnerships ensure students gain practical experience and are well-equipped for their careers. SET's international community, comprising students and faculty from over 50 countries, fosters a rich learning environment and global perspectives. With a strong emphasis on research, our faculty and students work on groundbreaking projects in collaboration with industry and global partners.

The School of Environment, Resources and Development

The School of Environment, Resources and Development (SERD) has been at the forefront of developing highly qualified and committed professionals who lead and guide the transition to sustainability in this region and the globe. Our postgraduate education, research, and outreach initiatives tackle a diverse array of environmental, resource, and development challenges through interdisciplinary Master's and Doctoral programs, innovative research, and capacity-building efforts. Many of our programs are closely aligned with the Sustainable Development Goals (SDGs), ensuring that SERD graduates are well-equipped to contribute meaningfully to sustainability efforts both regionally and worldwide.

The School of Management

The School of Management (SOM) offers 12 programs that include the top-ranked MBA and Business Analytics & Digital Transformation (BADT) MSc programs as well as PhD, DBA, International Finance, Digital Marketing and bespoke programs for professionals that include Banking & Finance, BADT and ESG. The MBA and MSc programs are taught by a strong mix of established researchers and business leaders. SOM sees many of its students enjoy flexible mode study options and that includes the option of in-person classes or via Zoom, daytime or evening/weekend classes and/or flexible payment plan.

Specialized applied research and outreach centers

AIT hosts several specialized centers aimed at addressing regional and global challenges through research, innovation, and capacity building. These centers collectively contribute to AIT's mission of advancing knowledge, fostering innovation, and addressing key regional and global challenges through interdisciplinary research and education.

Here is an overview of some prominent centers at AIT:

1. Geoinformatics Center (GIC)

The Geoinformatics Center focuses on the application of geospatial technology to address issues related to natural disasters, urban planning, and environmental monitoring. GIC provides training, research, and development in remote sensing, GIS, and spatial data management.

2. Regional Resource Centre for Asia and the Pacific (RRCAP)

RRCAP aims to support sustainable development in the Asia-Pacific region through research, capacity building, and networking. It works on various environmental issues, including climate change, biodiversity conservation, and environmental governance.

3. AIT Solutions

AIT Solutions is dedicated to providing innovative engineering and technology solutions. It offers consultancy services, project management, and capacity building in fields such as infrastructure development, smart cities, and sustainable construction.

4. Artificial Intelligence Center

The AI Center at AIT focuses on advancing research and applications of artificial intelligence and machine learning. It collaborates with industry and academia to develop AI-driven solutions for various sectors, including healthcare, finance, and urban development.

5. Entrepreneurship Center

The Entrepreneurship Center aims to nurture an entrepreneurial spirit among students and professionals. It provides training, mentorship, and support for startups and innovation, fostering a culture of entrepreneurship and innovation within the AIT community and beyond.

6. Air Quality Nexus

This center is dedicated to improving air quality through research, monitoring, and policy advocacy. It addresses issues such as air pollution, health impacts, and sustainable urban development, providing data and solutions to improve air quality in the region.

7. Global Water and Sanitation Center

Focused on addressing water and sanitation challenges, this center conducts research and offers training programs to promote sustainable water management practices. It aims to improve access to clean water and sanitation services, particularly in underserved communities.

8. AIT Extension

AIT Extension offers professional development programs, short courses, and training workshops in various fields. It caters to the needs of professionals and organizations seeking to enhance their skills and knowledge in areas such as management, technology, and sustainable development.

9. CIFAL Center

CIFAL (Centre International de Formation des Autorités et Leaders) Center at AIT is part of a global network of training centers affiliated with the United Nations Institute for Training and Research (UNITAR). It focuses on capacity building and knowledge sharing in sustainable development, governance, and urban planning.

10. Belt and Road Research Center

This center conducts research on the impacts and opportunities of the Belt and Road Initiative (BRI). It aims to foster collaboration and knowledge exchange among countries involved in the BRI, addressing issues such as infrastructure development, trade, and investment.

11. Centre for Global Challenges

This center is an initiative aimed at addressing major global issues through interdisciplinary research and collaboration. It focuses on areas such as climate change, sustainable development, and technological innovation to develop solutions that benefit society. By bringing together experts from various fields, the center seeks to drive impactful change and advance global progress.

12. Yunus Center AIT

A collaboration with Nobel Laureate Professor Muhammad Yunus and AIT, YCA promotes social business to eradicate poverty. Leveraging AIT's global network, it drives innovation and sustainable development.

13. AIT Vietnam

Established in 1993, AIT Vietnam is the first non-profit international educational organization in the country. With nearly 30 years of excellence, it has trained over 4,100 Masters and PhDs and 30,000 experts now serving in key roles across sectors.

14. Internet Education and Research Laboratory (intERLab)

intERLab is a hub for Internet research and education, fostering global collaborations and innovation. It offers training for engineers, policymakers, and professionals, addressing technical, social, and business aspects of the Internet.

KEY FACTS AND FIGURES

Students & Alumni

1700+ students from **50+** countries & territories

38,000+
short-course trainees from **100+** countries

27,000+
alumni from **100+** countries & territories

Faculty/ Staff

140+
world-class faculty from **20+** countries

Academic & Research

50+
Graduate Courses

1,078
Academic Programs

250+
ongoing Research Projects

500+
research and support staffs

ACADEMIC PROGRAMS

SCHOOL OF ENGINEERING TECHNOLOGY (SET)

Department of Civil and Infrastructure Engineering

- Construction, Engineering, and Infrastructure Management (CEIM)
- Disaster Preparedness, Mitigation & Management (DPMM)
- Geotechnical & Earth Resources Engineering (GTE)
- Structural Engineering (STE)
- Transportation Engineering (TRE)

Department of Industrial Systems Engineering

- Bio-Nano Materials Science and Engineering (BNMSE)
- Industrial and Manufacturing Engineering (IME)
- Medical Engineering (MDE)
- Mechatronics and Machine Intelligence (MMI)

Department of Water Resources and Environmental Engineering

- Environmental Engineering and Management (EEM)
- Water Engineering and Management (WEM)

Department of Information and Communication Technologies

- Computer Science (CS)
- Data Science and Artificial Intelligence (DSAI)
- Information and Communications Technologies (ICT)
- Information Management (IM)
- IoT (Internet of Things) Systems Engineering
- Remote Sensing and Geographic Information Systems (RSGIS)
- Telecommunications (TC)

SCHOOL OF ENVIRONMENT, RESOURCES AND DEVELOPMENT (SERD)

Department of Food, Agriculture, and Natural Resources

- Aquaculture and Aquatic Resources Management (AARM)
- Agribusiness Management (ABM)
- Agricultural Systems and Engineering (ASE)
- Food Engineering and Bioprocess Technology (FEBT)
- Food Innovation, Nutrition and Health (FINH)
- Natural Resources Management (NRM)

Department of Energy and Climate Change

- Climate Change and Sustainable Development (CCSD)
- Sustainable Energy Transition (SE)

Department of Development and Sustainability

- Development Planning Management and Innovation (DPMI)
- Development and Sustainability (DS)
- Gender and Development Studies (GDS)
- Urban Innovation and Sustainability (UIS)

SCHOOL OF MANAGEMENT (SOM)

- Business Administration (MBA)
- Business Analytics and Digital Transformation (BADT)
- International Finance (IF)
- Digital Marketing (DM)

School of Engineering and Technology
Department of Civil and Infrastructure Engineering

CONSTRUCTION, ENGINEERING, AND INFRASTRUCTURE MANAGEMENT (CEIM)

Program Overview

Our master's program offers advanced coursework focusing on cutting-edge theories and research methodologies in construction project management. Students delve deep into the intricacies of construction organization management, gaining expertise in optimizing resources and enhancing project efficiency. Through rigorous academic training and practical experience, graduates emerge equipped to tackle complex challenges and lead innovation in the construction industry.

Key Courses

Project Cost and Financial Management, Organizational Management in Construction, Quality Management in Construction, Integrated Project Planning and Control, Safety and Health Management in Construction, Infrastructure Development and System Management and Project Financing.

Research in Action

The CEIM program has been involved in numerous professional executive capacity development projects in Vietnam and Myanmar since 2007. These projects focus on enhancing the skills of professional and executive engineers and managers engaged in large-scale mega construction projects.

Additionally, CEIM provides engineering solutions related to BIM adoption in the construction industry, spanning from design and construction to prefabrication and precast applications. A good example is System dynamics modeling for BIM adoption in Thai architectural and engineering design industry. For further details please see https://www.emerald.com/insight/content/doi/10.1108/CI-03-2016-0018/full/html.

Career Prospects

Graduates of the CEIM program have diverse career opportunities, ranging from roles in contractor, investor/developer, and project management consulting to entrepreneurship (business owner). They can be involved in various construction projects, including housing, buildings, apartments, factories, power plants, petrochemical facilities, highways, airports, seaports, and oil and gas pipelines. Equipped with advanced theory and practical skills, they excel in optimizing resources, managing teams, and overseeing complex projects, making them valuable assets in the construction industry's diverse sectors.

CONTACT DETAILS

Academic Program Coordinator
Professor Bonaventura Hadikusumo
email: kusumo@ait.ac.th

Program Secretary
Ms. Woranuch Chumchat
email: woranuch@ait.ac.th

Website
https://ait.ac.th/program/construction-engineering-and-infrastructure-management-ceim/

PROMINENT ALUMNI

Dr. Narong Leungbootnak
Class of 2005, Thailand
Advisor & Project Director,
Future Engineering Thailand

He takes the leadership role in managing Energy and Environmental Design-LEED projects, by obtaining certification of green building professionals in sustainable architecture, design, planning, development, and related consulting in a variety of market approaches.

QUOTE FROM STUDENT

Ms. Niva Thapa
Nepal

"The CEIM program is expertly designed to bridge the gap between engineering and management, offering essential knowledge for effective project planning in the real world. This program is an excellent fit for both engineers and architects, equipping them with the tools and expertise needed to excel in their fields. Whether you're looking to enhance your technical skills or expand your management capabilities, CEIM provides a comprehensive education that meets the demands of modern construction and infrastructure challenges."

QUOTE FROM ALUMNI

Dr. Mazlina Zaira Mohammad Kljajic
Class of 2017, Malaysia
Faculty member at UITM Malaysia

"IT's coursework for postgraduates on this program was exceptionally rigorous, yet immensely rewarding, thanks to the guidance of experienced lecturers with diverse backgrounds. The technical depth of the coursework was truly impressive, providing a comprehensive and practical education that blended theory with real-world applications. The assignments were thoughtfully designed to simulate industry scenarios, particularly focusing on project planning. These tasks not only honed my analytical skills but also instilled in me a deep appreciation for the complexities of managing large-scale construction projects. What stood out the most was the personalized attention and mentorship I received from the faculty."

School of Engineering and Technology
Department of Civil and Infrastructure Engineering

DISASTER PREPAREDNESS, MITIGATION AND MANAGEMENT (DPMM)

Program Overview

This is an interdisciplinary academic program at AIT that aims to cultivate skilled professionals capable of making substantial contributions to the principles, practices, and methodologies of disaster preparedness, mitigation, and management. It offers a balanced curriculum that integrates physical and social sciences, along with engineering aspects of disaster risk management that equips students to understand and tackle complex issues within the framework of global influencers such as sustainable development goals and climate change. Graduates of the program will be poised to take on leadership roles in crafting effective disaster management policies, strategies, and techniques, while also promoting community awareness to mitigate the impact of escalating disasters.

Why DPMM?

- Increasing demand for Disaster Management professionals: U.S. Bureau of Labor projected 4% increase of 4% employment in this sector from over decades; attributed to the increasing complexity of disaster response and the need for skilled professionals to address the challenges posed by disasters effectively. (UNDRR, 2019)
- Global Impact: Studying in DPMM equips students with the skills and knowledge to make a meaningful difference in disaster-prone regions worldwide.
- Interdisciplinary approach: The comprehensive approach prepares students to address the complex challenges associated with disasters effectively.

Key Course

The DPMM program covers various critical aspects of disaster management, including community-based risk management, remote sensing for mitigation, floods and droughts, managing human conflicts and humanitarian emergencies, early warning systems, earthquake mitigation, disaster governance and policy, vulnerability assessment, and coastal resilience.

Research in Action

- Climate Resilient Infrastructure for Social Transformation and Adaptation (CRISTA): This research project aimed at developing a climate adaptation solution to reduce the impacts of climate related hazards on critical road and power infrastructure in Nepal and Bangladesh. The developed CRISTA solution is a near real time infrastructure monitoring system which includes a mobile application for crowdsourced information and a web-GIS computer dashboard for local authorities. The CRISTA project has scaled up to CRISTA 2.0, focusing to expand the geographical coverage to include three municipalities in Nepal and technical capacity of the CRISTA system to provide a more robust critical infrastructure monitoring system for local authorities.
- Living Deltas Hub (LDH): As the leading partnership on delta science and research in Asia, Living Deltas Hub focuses on investigating mitigation and adaptation measures against climate change to achieve sustainable deltas and delta livelihoods. LDH is an international collaboration between academic institutes, non-governmental organizations, and civil society from more than five countries, including the UK, India, and Thailand. Asian Institute of Technology undertook a comprehensive risk characterization effort in the study areas (Bangladesh, India, Vietnam).
- Strengthening Climate Resilience of Agricultural Livelihoods in Savannakhet Province, Lao PDR through participatory Ecosystem-based Adaptation: This research project aims to enhance the climate resilience of vulnerable and marginalized groups in Savannakhet Province, Lao PDR by recommending potential ecosystem-based adaptation measures to reduce the adverse impacts of climate-related hazards on agricultural livelihood activities. It is a collaborative project between academic institutes and researchers in Thailand and Lao PDR.
- Risk Index for Climate Displacement (RICD): RICD is an initiatives collaboration of the International Organization for Migration (IOM), the University of the Philippines Resilience Institute (UPRI) and the Asian Institute of Technology (AIT) that aims to increase understanding of current and future impacts of climate change, especially as it relates to migration and displacement. With improved forecasting created as part of this collaboration, IOM, UPRI, and AIT will support governments and communities to increase the resilience of populations most likely to be impacted by climate-induced displacement and working towards averting or addressing loss and damage.

CONTACT DETAILS

Academic Program Chair
Dr. Indrajit Pal
email: indrajit-pal@ait.ac.th

Program Officer
Ms. Ajeng T Widyastuti
email: ajeng@ait.ac.th

Website
www.dpmm.ait.ac.th

PROMINENT ALUMNI

Dr. Karn Paneetsin
Class of 2014, Thailand
Deputy Mayor of Mae Hong Son Municipality, Thailand

He promotes transformation into a culturally enriched smart city to unlock the cultural and agricultural tourism potential of the region, driving sustainable economic growth and achieving long-term objectives.

QUOTE FROM STUDENT

Mr. Adi Salleh
Malaysia

"Choosing AIT for my education in disaster management has revolutionized my approach as an insurance professional dealing with natural disaster finance. Their program uniquely integrates disaster management principles with engineering techniques, providing me with an understanding of the dynamics at play during catastrophic events. Through Flexi Mode and live session classes, I've gained insights into risk assessment methodologies, modelling and management for disaster scenarios while maintaining my daily job. I can have a full interaction with professors, classmates and actively join any live discussion and presentation"

QUOTE FROM ALUMNI

Mr. Kittinut Pimpakhun
Class of 2023, Thailand
Urban Resilience Project Associate at International Union for Conservation of Nature (IUCN) Thailand

"TDPMM wasn't just a course—it was an awakening. Before it, I wandered in a haze, unable to discern the nuances between hazards and disasters. Now, armed with its insights, see them as opportunities for proactive planning. My professor's words echo in my mind: 'Not all hazards result in disaster, but all disaster is rooted in hazard.' As an Urban Resilience Project Associate at IUCN ARO, I merge my urban planning background with DPMM's revelations to design resilient communities. DPMM didn't just shape my career; it emboldened me to make a tangible difference in safeguarding urban spaces against future adversities."

School of Engineering and Technology
Department of Civil and Infrastructure Engineering

GEOTECHNICAL AND EARTH RESOURCES ENGINEERING (GTE)

Program Overview

The GTE program equips professionals with the necessary expertise, abilities, and mindset to tackle complex geoengineering issues and stay abreast of current trends in geotechnical engineering. By combining civil engineering and geology, this program leverages the advantages of integrating both disciplines in geotechnical practices. This integration brings about numerous opportunities, ensuring that geotechnical engineering remains a crucial element in shaping future infrastructure.

GTE faculties realize that the 'one size fits all' approach is no longer feasible; and that students excel at different things and can be grouped by intelligence and potential rather than age. GTE invites adjunct faculties from diverse backgrounds to be adapted and content-rich to create professionals with a far-reaching vision.

GTE has set up three lab centers, one for geotechnical research, one for geosynthetics, and another one for subsurface exploration. The purpose of these labs is to serve both teaching and client needs. GTE students learn by doing real projects, and the labs help new research grow by testing things on a small scale in the lab along with larger scales in the field and on modeling.

Key Course

The key courses in GTE cover five major areas: Soil engineering, Ground improvement, Tunneling and excavation, Engineering geology, and Geoenvironmental and subsurface engineering.

Required courses: Advanced soil mechanics and testing, Engineering geology, Rock mechanics, Foundation Engineering and Design, and Analytical and numerical methods for geotechnical engineering.

Elective courses include Underground excavation and tunneling, Exploration geophysics, Unsaturated soil mechanics in engineering practice, ground improvement techniques, Soil dynamics and earthquake engineering, Forensic geotechnical engineering for problematic soils, Advanced subsurface analysis, and interpretation techniques for geo-environment.

Research in Action

The research interest of GTE faculties focuses on specialized fields of the behavior of soil and rocks, providing valuable insights. The research has revolutionized geotechnical practices, driving efficiency, accuracy, and improved decision-making.

The GTE team at AIT is one of the groups that works on research projects, sponsored projects, and consulting projects. Geoenvironmental issues, reducing construction waste, cleaning up polluted sites, and geological-related hazards are some of the things that our GTE team is researching presently.

As the world moves more and more toward digitalization, geotechnical engineering is likely to change even more. This will allow engineers to solve difficult problems more accurately and quickly. A lot of different fields depend on data, and geotechnical engineering is no different. It opens up new ways to study, evaluate, and guess how the earth's materials and structures will behave. Geotechnical engineering has changed over the years from a field based on traditional research to one that uses technology to solve problems. The switch to digital has led to a lot of research and has changed how engineers look at and manage geological data.

Therefore, GTE presently deploys data collection methods, remote sensing techniques, GIS platforms, and simulation tools, which have changed the research. Using these new technologies, geotechnical engineers can make sure that infrastructure projects are stable and last a long time. This will make the future safer and more sustainable.

Career Prospects

GTE students are trained to learn how to learn, instead of being asked to memorize facts and figures. Problem-solving is no longer an additional skill to acquire, but rather a basic necessity. Students are well-trained with hands-on sessions to encounter geotechnical practices, driving efficiency, accuracy, and improved decision-making.

When our students graduate, they are hired by well-known public and private organizations, where they take on leadership roles and make a difference in their work. This includes:

- Private Sector Engineers: A lot of jobs are available, such as geotechnical design and building structures like dams, bridges, roads, tunnels, skyscrapers, ports, railway lines, and commercial buildings.
- Public Sector Organizations: GTE graduates work for the government in their home countries in departments like highways and roads, mineral resources, civilization, and irrigation. They do everything from planning on the ground to making policy decisions.
- Post-Graduate Studies: Most of our Master's graduates go on to study further at well-known universities around the world. While GTE Ph.D. graduates continue to work in post-doctoral positions at research institutes around the world after they finish their degrees.
- Academic Careers: Graduates of GTE are professionally trained to work in academic institutions as faculties and researchers. Many GTE graduates are now working well and doing important roles in universities across the world.

CONTACT DETAILS

Academic Program Chair
Dr. Avirut Puttiwongrak
email: avirut@ait.ac.th

Program Officer
Miss Supamas Untui
email: supamas@ait.ac.th

Website
https://ait.ac.th/program/geotechnical-and-earth-resources-engineering-gte/

PROMINENT ALUMNI

Dr. Twarath Sutabutr
Class of 1992, Thailand
OKMD President cum REEEP Governing Board

AIT Alumnus and former President of AITAA Thailand. He served in several Thai government positions in the past as a Chief Inspector-General attached to the Ministry of Energy, Director-General of Energy Policy and Planning Office (EPPO), Deputy Director-General of Department of Alternative Energy Development and Efficiency, and so on. Dr. Twarath also serves many positions in the Education space such as Board of Trustee at Konkhean University (KKU), Siam Technology College (STC), and Executive Committee at the Asian Institute of Technology (AIT). He is a special advisor to the Teach-for-Thailand Foundation, a social enterprise set up to create small changes in Thailand's educational system.

QUOTE FROM STUDENT

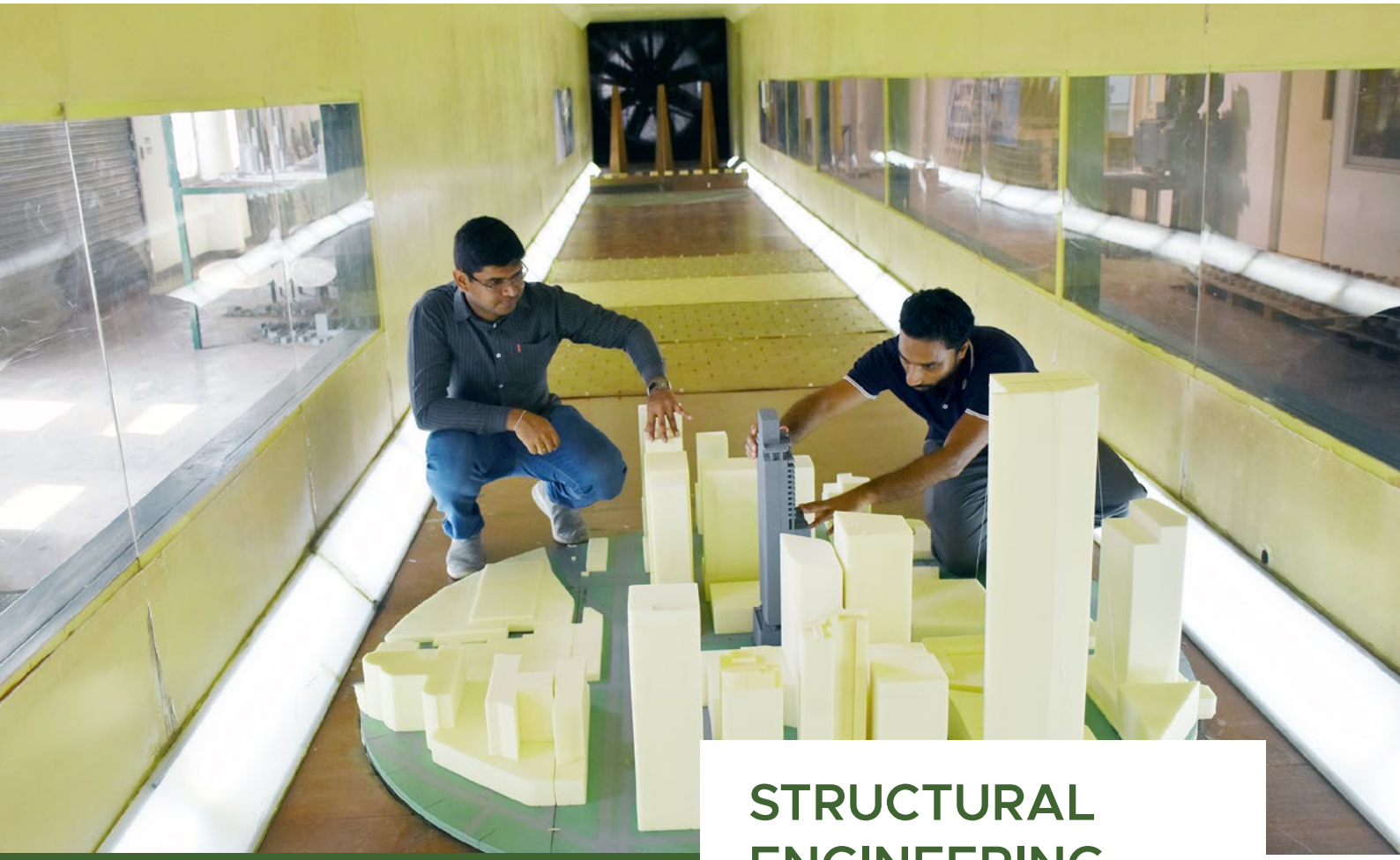
Ms. Khin Nyein Chan Kyaw
Myanmar

"Submerged in a rich blend of cultures, I learn alongside peers from varied nationalities at AIT. Engaging with esteemed geotechnical engineering faculty and alumni expands my insights beyond the classroom, inspiring me to advance my academic journey. Abundant networking opportunities extend potential doors to both the professional and academic realms. Supported by advanced laboratory facilities conducive to high-quality research, the holistic approach ensures my education goes beyond theory, fostering active participation in a global dialogue."

QUOTE FROM ALUMNI

Ms. Elaine Marie Z. Pena
Class of 2023, Philippines
Geology supervisor at AMH Philippines Inc.,'

"As an alumna of the GTE program at AIT, I am grateful for the exceptional learning environment provided by the department. It not only offers state-of-the-art laboratories for hands-on learning but also extends support to financially challenged students through student assistantships, facilitated by the GTE laboratory and the Asian Center for Soil Improvement and Geosynthetics. One highlight of my time in the program was the opportunity to participate in global project-based learning experiences in Japan, fostering collaboration and expanding our professional network across Asia. Under the mentorship of esteemed professors at GTE, I was able to contribute to scientific papers and present at international conferences. The confidence and skills I gained through my learning experience at GTE have proven invaluable in my role as an engineering geologist today."



School of Engineering and Technology
Department of Civil and Infrastructure Engineering

STRUCTURAL ENGINEERING (STE)

Program Overview

Structural engineering has always been seen as one of the few professions where one can combine technical skills with artistic flair. Structural engineers are known to be people who enjoy innovation, opportunities, responsibility, and excitement, whilst working within a creative profession. Structural engineers plan and design various structures such as buildings, bridges, dams, sport stadiums, towers, and underground structures. As they create the built environment, they have an enormous impact on our everyday lives. In order to design and construct safe and economic structures, they need to keep abreast with the latest methods of structural analysis, modeling concepts for computation, advanced design, material technology, and improved knowledge in structural loadings.

Key Course

Structural Engineering delivers three types of courses: basic, advanced, and interdisciplinary. Basic courses focus on the specific aspects of structural systems. They are offered in five areas: Analysis and Computations, Dynamics of Structures, Mechanics of Structures, Material Technology, Structural Design. Advanced and interdisciplinary courses address new frontiers and the integration of skills in a holistic manner and are designed specifically for doctoral or advanced master's students.

Area of Specialization

The availability of inexpensive computer technology allows structural engineers to equip themselves with advanced structural theories to improve the quality of their professional work and achieve global competencies. This is the core of studies in the area of Structural Analysis, Mechanics and Computation.

Structural Design and Materials prepares students for a career in structural engineering in its broadest sense. Depending upon individual choice and interest, students may select courses such that they receive training in a specific area of their choice.

Research in Action

Structural Health Monitoring and Damage Identification, Seismic Design and Seismic Retrofitting, Wind Tunnel Model Tests of Tall Buildings and Structures, Computational and Finite Element Modelling, Sustainable Materials and Design, Forensic Engineering and Damage Identification Techniques.

Research Facilities

The Seismic Load Simulation facility consists of several servo-controlled hydraulic actuators (to simulate seismic loads), strong reaction walls, a vertical load frame with linear bearings (to simulate moving gravity loads), a small shaking table, a strong reinforced concrete floor and various loading and measuring instruments. In this facility, various experimental seismic tests can be carried out on near-full-scale structural models, such as quasi-static tests, cyclic loading tests and pseudo-dynamic tests.

The Boundary Layer Wind Tunnel Laboratory is a state-of-the-art research facility for the study of wind loads and various complex wind-induced effects on buildings and structures. It can simulate atmospheric boundary layer winds as well as smooth and uniform wind in its 2.5m x 2.5m tunnel section with wind speeds ranging from 0.5 m/s to 20 m/s. The wind tunnel is equipped with hot-wire anemometers, multi-channel pressure transducers, dynamic multi-component force sensors, dynamic motion sensors, turntables, rotating side frames and various other instruments. With this facility, various types of advanced experimental research studies, student training and industrial aerodynamic tests could be conducted.

The Material Testing and Sensing facility is a structural engineering laboratory that hosts a range of testing facilities, including a 2000 kN and a 50 kN universal testing machine, a concrete permeability testing machine, and several pieces of equipment for conducting advanced research on concrete technology. The lab is also equipped with data acquisition systems for static and dynamic tests, LVDT (Linear Variable Differential Transformer), vibration sensors such as strain-based and force-balance accelerometers, and laser displacement sensors for non-contact measurement.

The research conducted in the facility encompasses the development of ultra-high-performance concrete, seismic retrofitting of masonry houses using fiber-reinforced coating, and the creation of new materials for a sustainable built environment. The vibration sensors are valuable tools for learning about structural identification and health monitoring of infrastructure.

Career Prospects

Embarking on a Master's in Structural Engineering at AIT opens up a world of opportunities for students. Our graduates are highly sought after by leading companies, including on-campus organizations like AIT SOLUTIONS and CSI BANGKOK, where many of our students' secure positions even before completing their degrees. The immense network and connections of our esteemed professors provide unparalleled support, helping students effortlessly transition into rewarding careers or pursue PhDs at prestigious institutions worldwide. With a combination of cutting-edge education and a strong professional network, your journey at AIT is the perfect springboard to a successful future in structural engineering.

CONTACT DETAILS

Academic Program Chair
Dr.Chaitanya Krishna
email: apc-ste@ait.ac.th

Website
https://ait.ac.th/program/structural-engineering-ste/

https://www.facebook.com/profile.php?id=100063801203223

PROMINENT ALUMNI

Mr. Arjun Kumar Karki
Class of 1997, Nepal
Secretary, Ministry of Urban Development, Government of Nepal

Mr. Karki has had a distinguished career in the Government of Nepal, having previously held important positions such as that of Acting Secretary / Regional Administrator, Western Region, Pokhara; Joint Secretary, Water & Energy Commission Secretariat; and as the Executive Director, Nepal Electricity Authority.

QUOTE FROM ALUMNI

Ms. Rukhsana Akhtar Rahooja
Class of 1986, Pakistan
Secretary, FPCCI's Standing Committee on Engineering, Research Industrialization. (FPCCI: Federation of Pakistan's Chamber of Commerce and Industries

"The SE program in AIT enhanced my analytical abilities which remained my key strengths in seeking technical and managerial solutions. As an AIT Graduate, I was always looked up professionally by my peers and superiors that proved to be my success engine in achieving"

School of Engineering and Technology
Department of Civil and Infrastructure Engineering

TRANSPORTATION ENGINEERING (TRE)

Program Overview

The Transportation Engineering field exposes students to the process of alleviating transportation problems. The coursework and research in the area provide advanced knowledge in transportation planning and economics, traffic engineering, and the design of highways/pavements and other transportation facilities. Transportation Engineering students acquire advanced skills concerning the planning, design, operations, maintenance, rehabilitation, performance, and evaluation of transportation systems, including their economic and public policy aspects.

The field imbibes in each student the development of analytic, problem-solving, design, and management skills suitable for public and private sector professional work.

Key Course

Required courses: Transportation Systems, Transportation Planning Methods and Analysis, Transportation Demand Modeling and Forecasting

Elective courses: Airport Planning and Design, Planning for Traffic Safety and Injury Prevention, Intelligent Transportation Systems, Design and Performance of Highway and Airport Pavement, Pavement Management Systems, Transportation Logistics, Traffic Engineering, Advanced Geometric Design and Highway Safety, Selected Topic: Logistics Systems, Selected Topic: Rail System Administration and Management.

Area of Specialization

TRE offers two areas of specialization, (a) Planning and Engineering (b) Highways and Pavements. Under Planning & Engineering, students are trained on planning and logistics as well as traffic and safety. Among other topics, they are immersed in issues relating to transportation systems, urban/regional transportation analysis and planning methods, airport planning & design, and traffic engineering. Students gearing for a specialization in Highways & Pavements take courses in design and operation as well as in management systems and maintenance. They are skilled in geometric design and highway safety, design/performance of highways and airport pavement as well as pavement management systems. Current research in Transportation Engineering covers transportation planning and economics, traffic engineering, traffic safety, and design of highways and pavements.

Career prospects

After graduating from TRE at AIT, your skills and knowledge will be elevated to international working standard. You will be fit in varying industries, with public administration and safety, professional, scientific and technical services, transport and postal and warehousing being the most prevalent Particular positions could be: Civil Engineers, Geotechnical Engineers, Quantity Surveyors, Structural Engineers and sooner closing to management level.

QUOTE FROM STUDENT

Ms. Jiranan Panpaksorn
Class of 2021, Thailand

"The curriculum in transportation engineering contains a lot of reasons and theory that we need to know is our career apart. Moreover, there are also workshops in every course to make us more understand the reasons and to clarify the theory in practicals"

QUOTE FROM ALUMNI

Ms. Phattarasuda Witchayaphong
Class of 2021, Thailand

"My whole Ph.D. journey of being an AIT student now seems like just one long dream. I have been challenged, motivated, and excited about the various cultures of international students from the very first moment I stepped on the AIT campus. At the beginning, I brought along a strong grasp of fundamentals in Transportation Engineering and an enthusiastic desire to learn all I can and benefit from what AIT has to offer. I especially owe gratitude to my principal supervisor at AIT-TRE, Dr.Kunnawee Kanitpong and Dr.Surachet Pravinvongvuth who have guided me through what started as a daunting maze, which eventually turned into a pathway of intellectual discovery"

CONTACT DETAILS

Academic matters
Prof. Kunnawee Kanitpong
Tel: (662) 524 5513
email: kanitpon@ait.ac.th

Administration matters
Ms. Nisarat Narnsuksa
Tel: (662) 524 6051
email: nisarath@ait.ac.th

Website
https://ait.ac.th/program/transportation-engineering-tre/
Youtube
https://youtu.be/vje-jCHarMM?si=b_OROPRU65jEXEEJ

School of Engineering and Technology
Department of Industrial Systems Engineering

BIO-NANO MATERIALS SCIENCE AND ENGINEERING (BNMSE)

Program Overview

Bio-Nano Materials Science & Engineering is a fusion of the disciplines of Nanotechnology and Bioengineering, which is highly interdisciplinary and a unique program in AIT. Inspired by nature, the BNMSE program seeks to enhance the exceptional properties and functionalities of nanomaterials & its derived systems through the synthesis, physico-chemical modification, and assembly of new materials, structures, and systems with fine control over composition, shape, and function. It is, therefore, designed to enhance a student's educational experience and career by offering the following:

- A multidisciplinary learning environment
- Integrated teaching & hands-on experience
- Application-based curriculum and research
- Critical thinking and problem-solving skills
- Access to opportunities in a wide range of job market

Key Courses

Characterization Tools in Nanotechnology (Required), Nanomaterials and Nanotechnology (Required), Colloids and Nanoparticles, Nano-Micro Fabrication Technologies, Catalysis, Enzyme Kinetics and Thermodynamics, Fundamentals of Bio-nano technology.

Research in Action

Our research primarily focuses on the use of inexpensive synthesis techniques to prepare semiconductor nanomaterials, plasmonic materials, nanocomposites, porous materials, and thin films, and apply them in various applications like solar energy harvesters, photocatalytic water/air purifiers, soft smart materials, self-healing materials, detection of toxic chemicals and wastes in the environment, SERS substrate design, biosensors for chemicals and disease detection and optical coatings.

Research Highlights

- Functionalized nanocellulose for smart agriculture & construction
- Nanocomposite thin films for optoelectronic devices & cool coatings
- Self-healing photopolymers for additive manufacturing
- Biomimicry & self-cleaning surfaces for filters & energy applications
- Nano-biosensors for early disease detection and environmental monitoring
- Nano-catalysts & nano-absorbents for water purification
- Soft functional polymers for sensing & robotics applications

Career prospects

The Bio-Nano Materials Science and Engineering is an emerging area with tremendous potential in the wide range of research and industries. Some of these includes (but not limited to) nanomedicines, biomedical research and applications, drug delivery, tissue engineering, theragnostic, biomimicry, robotics, sensing, smart surfaces, green materials and processes etc.

The graduates from the Bio-Nano Materials Science and Engineering program can, therefore, find jobs in a wide range of emerging industries, such as Industrial biotechnology & bioprocessing industries, Chemical/Biochemical industries, Manufacturing industries, Molecular electronics, Robotics, Green technologies, Pharmaceuticals, Medical devices and equipment, Digital healthcare, Biological computing, Sensing applications.

CONTACT DETAILS

Academic Program Chair
Dr. Tanujjal Bora
email: tbora@ait.ac.th

Administrative Secretary
Ms. Chaowaret Sudsaweang
Tel: +66(0)2524 6601
email: chowaret@ait.ac.th

Website
https://ait.ac.th/program/bio-nano-materials-science-and-engineering/

PROMINENT ALUMNI

Dr. Karthik Laxman
Class of 2011
CTO & Co-Founder, Stockholm Water Technology AB, Sweden

Dr. Karthik Laxman received his Master's degree in nanotechnology from Asian Institute of Technology (AIT) in 2011. Currently, he is the CTO & Co-Founder of the Stockholm Water Technology AB, Sweden.

"BNMSE @ AIT will give you the exposure and mindset required to succeed in the multi-cultural workforce that exist in almost all working environments today. Use the opportunity to broaden your mindset and learn from the very experienced faculty, who have lived this journey."

QUOTE FROM STUDENT

Ms. Apichaya Chantaraklud
Thailand

"The Bio-Nano Materials Science and Engineering program integrates biology, nanotechnology, and materials science to develop innovative solutions for healthcare, energy, and environmental challenges. This interdisciplinary approach equips students with cutting-edge skills and knowledge, fostering advancements in biomaterials, nanomedicine, and sustainable technologies."

School of Engineering and Technology
Department of Industrial Systems Engineering

INDUSTRIAL AND MANUFACTURING ENGINEERING (IME)

Program Overview

Since its inception in the early 1970's, the Industrial and Manufacturing Engineering program at AIT has committed to preparing qualified engineers with high-tech knowledge for supporting sustainable industrial development of the region. Starting as Systems Engineering in the early days and becoming Industrial & Manufacturing Engineering today, Industrial and Manufacturing Engineering program focuses on providing the skills to support the sustainable industrial development of the region. Students can specialize in one of the following areas of specialization: Industrial Engineering & Management, Supply Chain and Logistics Management, and Rapid Product Development.

Key Courses

Statistical Models and Design of Experiments (Required). Supply Chain Management, Applied Data Analytics, Product Design and Development (Required), Additive Manufacturing and Reverse Engineering, and Collaborative Manufacturing Systems.

Research in Action

There are two research groups under IME:

The Operations Research Group focuses on the applications of Operations Research & Management Science knowledge to help find solutions for various complicated problems in the manufacturing and service industries. The development of solution techniques for large-scale optimization problems in logistic and supply chain networks is also of interest to the group. At present, the focuses of this research group are on Supply Chain Management, Supply Contract, Supply Chain Resilience, Emergency Inventory Policies, and the Effects of Supply Disruptions.

The A-Cube Research Group was formed more than a decade ago and named after its initial three "A" areas, which were Adaptive Layered Manufacturing, Abrasive Waterjet Technology and Automotive Technology. Today, A-Cube focuses its effort on customer-oriented manufacturing that includes design for customer experience, co-created product design, image-based additive manufacturing from 3D CAD models, reverse engineering and sketch-based modeling, and flexible automation for rapid personalized production. Besides, the group is also active in additive manufacturing for tissue engineering.

Career prospects

IME graduates can seek jobs in various manufacturing plants, enterprises, and service sectors. With the background knowledge equipped in IME curriculums, IME graduates can work as production managers, process managers, quality managers, maintenance managers, transportation managers, logistics and supply chain managers, warehouse managers, design engineers, product and process developers, etc. In the present era of Industry 4.0, IME graduates can contribute to all functions of various enterprises to help achieve the ultimate goals and targets of Industry 4.0.

CONTACT DETAILS

Academic Program Chair
Prof. Huynh Trung Luong
email: luong@ait.ac.th

Associate Professor
Dr. Pisut Koomsap
email: pisut@ait.ac.th

Administrative Secretary
Ms. Chaowaret Sudsaweang
Tel: +66(0)2524 6601
email: chowaret@ait.ac.th

Website
http://ise.ait.ac.th/industrial-and-manufacturing-engineering-ime/

PROMINENT ALUMNI

Prof. Ho Thanh Phong
Class of 1993 and 1997, Vietnam

Prof. Ho Thanh Phong got his master's and doctorate degrees in the Industrial Engineering & Management field of study at the Asian Institute of Technology in 1993 and 1997, respectively. He was the founder of the "Industrial Systems Engineering Program" in Vietnam after he came back from AIT. Prof. Ho Thanh Phong has served as the President of various big state and private universities in Vietnam, e.g., International University – National University of Ho Chi Minh City, Hong Bang International University.

QUOTE FROM STUDENT

Ms.Paridhi Dhungel
Nepal

"I feel incredibly fortunate to have the opportunity to pursue my passion for Industrial and Manufacturing Engineering as a degree at AIT. This journey has been both challenging and rewarding, offering me the chance to develop necessary skills and expertise in my field of study. The coursework and hands-on projects have helped me navigate and assess my career goals. I am eager to contribute to the advancements of the industrial and manufacturing sectors in the near future"

QUOTE FROM ALUMNI

Mr. Sidharath Joshi
Class of 2020 and 2024, India

"TI am delighted to share my experience as a doctoral student in the Industrial and Manufacturing Engineering (IME) program at AIT. Under the mentorship of Prof. H.T. Luong, I conducted research on developing mathematical models for supply chains, benefiting greatly from his expertise and guidance. Prof. Luong's dedication to student success and innovative approach to teaching made my academic journey both challenging and rewarding. With world class faculties, IME program offers a well-balanced curriculum that combines theoretical knowledge with practical applications. The state-of-the-art facilities and collaborative environment provided the perfect setting for my research"

School of Engineering and Technology
Department of Industrial Systems Engineering

MEDICAL ENGINEERING (MDE)

Program Overview

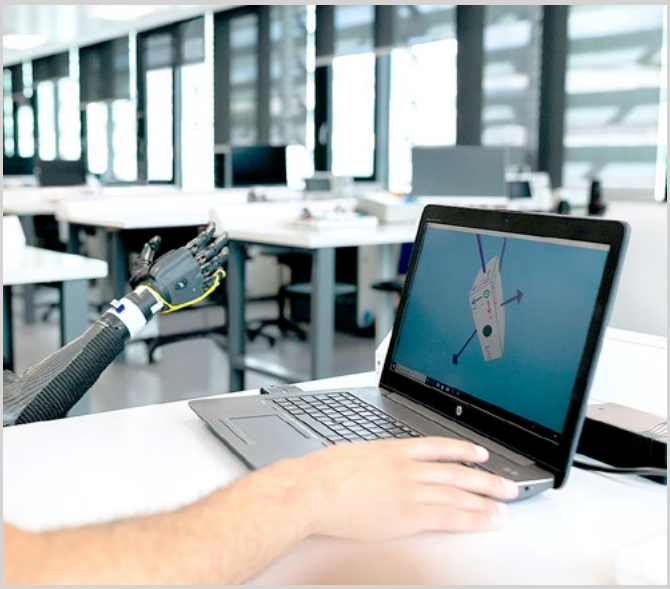
This is a comparatively new program at AIT, launched immediately after Covid. Medical Engineering is an interdisciplinary program primarily merging robotics, biological, and medical sciences. It is designed for students with scientific backgrounds in chemistry, biology, health & life sciences, medicine, nursing, engineering fields and biomedical fields. A key aim is to increase health quality by providing technologically advanced solutions tailored to the customer, innovating modern medicine via the methods and the tools typical of engineering, approaching healthcare challenges and creating new opportunities in academia and industry.

Key Courses

Biomaterials for Medical Engineers (Required), Physiology for Medical Engineering (Required), Biomechanics, Tissue Engineering and Prosthetics, Medical Instrumentation and Imaging.

Research in Action

Functional Biomaterials and Smart Devices: This research group focuses on Bionanomaterials and bio composites, Sol-gel synthesis, Functional nanoparticles, Metal-Organic Frameworks, Biomolecules/materials interaction. The current projects include the development of SPR-based sensors for disease biomarkers, and new immobilization protocols for fluorescence immunosensors.



QUOTE FROM STUDENT

Ms. Napasorn Wora-Anuwattanakul
Thailand

"As a current student in Medical Engineering (MDE), I am passionate about using technology to improve healthcare. Every day, I am inspired by the potential of this field to make a real difference in people's lives. I see Medical Engineering as a bridge between medicine and technology, where innovation meets compassion. My studies are not just about learning; they are about preparing to contribute to a field that has the power to change the world for the better."

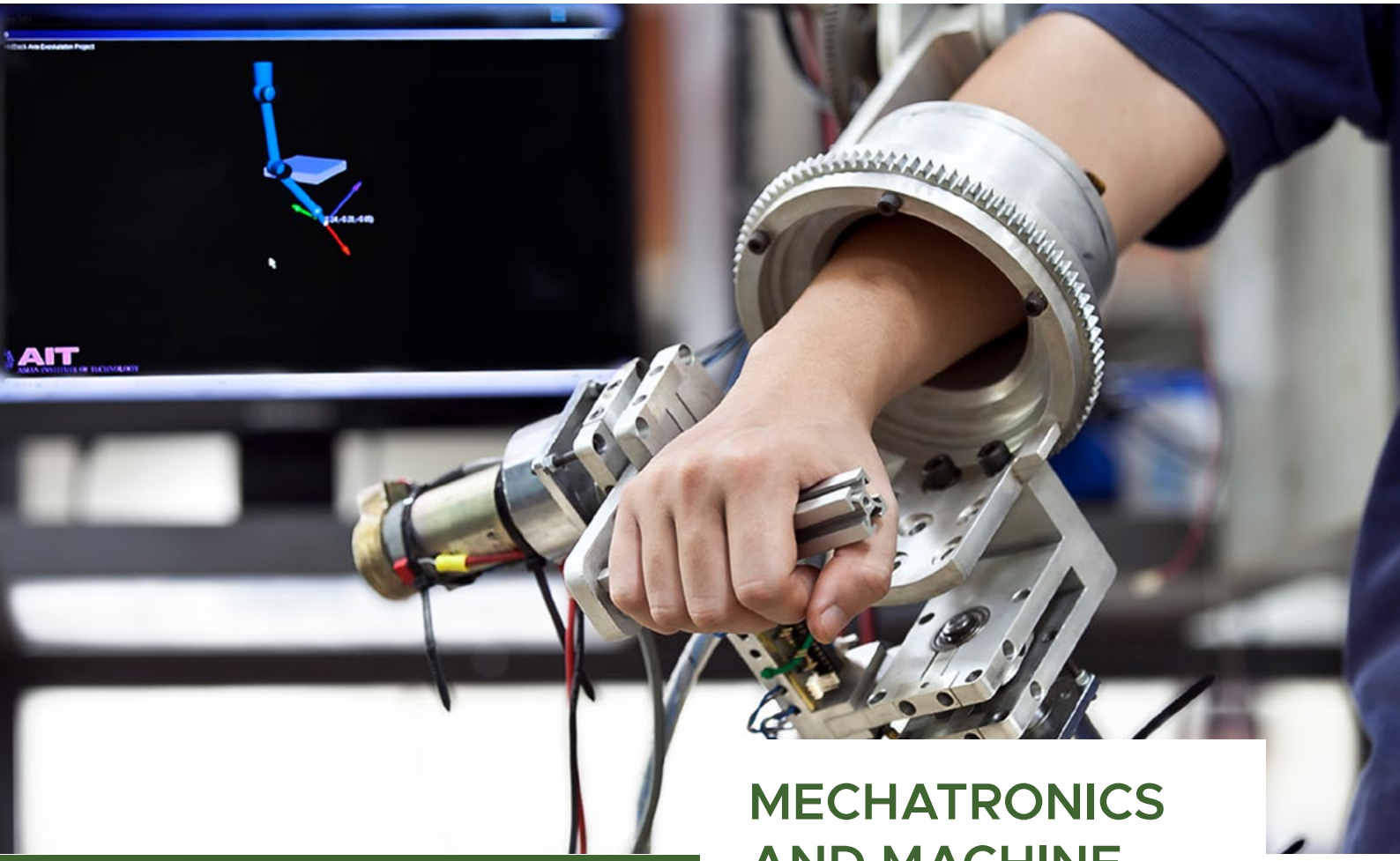
CONTACT DETAILS

Academic Program Chair
Prof. Huynh Trung Luong
email: luong@ait.ac.th

Associate Professor
Dr. Pisut Koomsap
email: pisut@ait.ac.th

Administrative Secretary
Ms. Chaowaret Sudsaweang
Tel: +66(0)2524 6601
email: chowaret@ait.ac.th

Website
http://ise.ait.ac.th/industrial-and-manufacturing-engineering-ime/



School of Engineering and Technology
Department of Industrial Systems Engineering

MECHATRONICS AND MACHINE INTELLIGENCE (MMI)

Program Overview

The MMI program provides knowledge and practical skills through synergic integration of mechanical, electrical and information technology for robots and machines design and development. This program offers a unique curriculum that trains the students to design and develop mechanisms, electronic circuits, controllers, and machine intelligence algorithms.

Key Courses

Required Courses: Control Theory, AI and Neuro-Fuzzy Theory

Elective Courses: Sensing and Actuation, Automation Technology, Deep Learning for Computer Vision, Deep Reinforcement Learning, Kinematics and Dynamics of Mechanisms and Robots.

Research in Action

DEVELOPMENT OF A HAPTICS DISPLAY FOR VISUALLY IMPAIRED

In this research project, a camera to tactile haptics display system has been developed for use by the visually impaired. TV images from a glasses-mounted camera are processed by a master controller and forwarded via RS485 communication to a set of slave controllers. These controllers employed PID with gravity and coulomb friction compensation controllers in tandem to set the taxel displacements to the setpoints corresponding to the received image. After the heights are set, a lock is engaged, enabling the user to sense the tactile image without affecting the pins. This haptic display had the resolution to 10×15. Low detail images were visually recognizable on the haptic display.

DEVELOPMENT OF AN AUTONOMOUS FORKLIFT

In this research project an autonomous forklift has been developed. The autonomous forklift guided by a laser scanner can navigate itself with the position accuracy within 1 cm and direction accuracy within 1˚. The forklift is able to move to the waypoints and do the tasks following the preprogrammed script.

Career Prospects

After graduation, the graduates from Mechatronics and Machine Intelligence program work as engineers who are responsible for designing and implementing production lines, automation lines, machines and robots in electronics and automotive industries. Some work in the R & D department of companies. Some work as researchers at research organizations and universities. Some graduates become lecturers in academic institutes and universities.

CONTACT DETAILS

Academic Program Chair
Prof. Manukid Parnichkun
email: manukid@ait.ac.th

Associate Professor
Dr. Mongkol Ekpanyapong
email: mongkol@ait.ac.th

Administrative Secretary
Ms. Chaowaret Sudsaweang
Tel: +66(0)2524 6601
email: chowaret@ait.ac.th

Website
https://ait.ac.th/program/mechatronics-mec/

PROMINENT ALUMNI

Dr. Bui Trung Thanh
Class of 2005 and 2008, Vietnam

Dr. Bui Trung Thanh obtained M.Eng in MMI May 2005 and D.Eng. in December 2008, Vietnam. Currently, he is the President of Hung Yen University of Technology and Education (UTEHY), Vietnam.

QUOTE FROM STUDENT

Herschel Apat Gutierrez
Philippines

"The MMI program pushes oneself out of your comfort zone into breaking boundaries. As a master student, you are being showered from the well of knowledge on our in-depth and up-to-date curriculum along with its hands-on application which gives you a new perspective that will eventually shape you into a new version of yourself. The program escorts you on a roller coaster ride of the latest cutting-edge and emerging technologies that allows you to learn, be equipped and refine your skills in developing your ideas into reality. Applying robotics, automation and control systems along with its integration of artificial intelligence, having these core foundations at your fingertips, one can imagine how we can be an impetus to innovation and technological advancement."

QUOTE FROM ALUMNI

Yasiru Fernando
Class of 2022, Philippines
Fabrication Laboratory Technical Officer, Chulalongkorn School of Integrated Innovation

"The Mechatronics program at AIT has been a cornerstone in shaping my professional journey. The blend of rigorous academic coursework and hands-on laboratory experience provided me with a profound understanding of robotics and automation. The collaborative environment and guidance from esteemed faculty members were instrumental in honing my technical expertise and research capabilities. Reflecting on my time at AIT, I realize it not only enriched my knowledge but also fueled my passion for advancing technology. Today, as the Fabrication Laboratory Technical Officer at the Chulalongkorn School of Integrated Innovation, I continually draw upon the skills and inspiration gained from AIT to contribute meaningfully to the field of mechatronics and beyond"

School of Engineering and Technology
Department of Water Resources and Environmental Engineering

ENVIRONMENTAL ENGINEERING AND MANAGEMENT (EEM)

Program Overview

This program looks for solutions to various environmental problems, including wastewater treatment and disposal systems, air pollution, solid and hazardous wastes, water minimization and life cycle assessment, environmental impact assessment and more. Developed in collaboration with industry and the public sector environmental specialists, the program offered an integrated approach towards the current and long-term environmental issues, planning and management for the sustainable development of industrial production systems.

The Environmental Engineering and Management program boasts a robust team of both teaching and non-teaching staff, enhancing its appeal to both students and scholarship donors. At present, the EEM program is supported by five full-time faculty members. These faculty members bring a wealth of experience from diverse backgrounds, all focused on addressing current and future environmental challenges. EEM faculty members have been from Thailand, China, Mexico, and Nepal while receiving education from prestigious institutions worldwide, including Thailand, the USA, China, Japan, Mexico, Europe, and Nepal. Our faculty's research interests span a wide spectrum of crucial environmental issues, encompassing areas such as wastewater treatment, PM2.5 and other air pollution problems, management of short-lived climate pollutants from agriculture and waste management system, handling of solid (including plastics) and hazardous wastes, inclusive sanitation, and the life cycle assessment.

Key Courses

Solid Waste Management, Environmental Quality Management, Environmental Health and Sanitation, Membrane Technology in Water and Wastewater Treatment, Applied Microbiology and Laboratory, Advanced Processes for Wastewater Treatment, Environmental Impact Assessment, Industrial Waste Abatement and Management, Air Pollution Modeling and Applications, Hazardous Waste Technology and Management, Design of Air Pollution Control Systems, Microbiology of Anthropogenic Ecosystems and Management, Sanitation Systems and Services, Sanitation Technology, Governance and Gender Equality, and Emergency Sanitation.

Research in Action

The Environmental Engineering and Management (EEM) team at AIT is renowned for its proactive involvement in a myriad of research, sponsored, and consultancy-based projects. Among the notable ongoing research endeavors, some examples of our current EEM projects are developing solutions for transboundary air pollution in the Lower Mekong region Microbial Greenhouse Gas Reduction in RICE: MicroG-RICE, MICRO-biome climate smart applications. There follows a list of recent applied research undertaken:

- Developing solutions for transboundary air pollution in the Lower Mekong region: The project aims to develop a database for air pollution, Greenhouse Gas and Short-Lived Climate Pollutant (SLCP) emissions from forest fires and open burning in Lower Mekong

Sub-region, including Cambodia, Laos, Thailand and Vietnam. The database can be used to further assess the air pollution, health and climate impacts of haze pollution as well as the benefits of achieving the new ASEAN Haze-free Roadmap in the region under different emission reduction scenarios.

- Microbial Greenhouse Gas Reduction in RICE: MicroGRICE: We are living in a microbial world, where microorganisms rule the creation, release, and mitigation of greenhouse gases from anthropogenic ecosystems we create like rice paddy fields and wastewater treatment to name a few. MicroGRICE aims to develop micro-biome climate-smart solutions where the native microbiology of rice soils is enhanced and applied as a solution to mitigate methane emissions from rice cultivation.
- Integrating Decentralized Wastewater Management into the Master Plan of Bangkok Sewerage Systems: The project aims to revise a master plan for sewerage systems of Bangkok Metropolitan Administration (BMA) addressing urbanization and population growth challenges while safeguarding the environment and public health. Using the Geographic Information System (GIS) and PCSWMM software, it analyzes data and simulates scenarios to select appropriate wastewater collection and treatment systems (e.g., onsite, cluster, centralized) for the next 30 years of the BMA.
- Integrated Assessment of SDGs at the Provincial Level in Thailand: Leveraging Big Earth Data: This project aims to address the challenges in monitoring and assessing SDGs in Thailand, leveraging Earth Observation and big data, and proposes a holistic framework for evaluating the progress of SDGs at sub-national level and supporting the policy-making towards efficient and inclusive SDG implementation in the country and build the capacity in efficient SDG assessment in the ASEAN region.

Please see following link for further details;
https://ait.ac.th/2023/06/mitigating-greenhouse-gas-emissions-in-rice-agriculture/

Career Prospects

With our comprehensive training in environmental engineering and management, our students are equipped with the knowledge and skills necessary to tackle real-world challenges and devise sustainable solutions. Through hands-on sessions and practical experience, they develop expertise in various tools and techniques crucial for addressing environmental problems effectively.

Upon graduation, our students have a wide array of career paths to choose from, including:

- Environmental Engineering & Science: Engage in designing, implementing, and managing projects that mitigate environmental impact.
- Consultancy: Provide expert advice and solutions to organizations seeking to improve their environmental performance.
- Water & Wastewater Engineering: Focus on managing water resources, treatment, and distribution systems.
- Environmental Management: Oversee environmental compliance, sustainability initiatives, and risk assessment in various industries.
- Research & Development: Contribute to the advancement of environmental technologies and methodologies through innovative research.
- Policy Development: Shape environmental policies and regulations at local, national, and international levels.
- Academic: Pursue teaching and research positions in academic institutions, shaping the next generation of environmental professionals.
- Business (Entrepreneur): Establish ventures focused on sustainable solutions, eco-friendly products, or environmental consulting services.
- International Organizations: Working on different United Nations agencies, Food and Agriculture Organization (FAO), Deutsche Gesellschaft für International Zusammenarbeit (GIZ), the World Bank Group, and more.

CONTACT DETAILS

Academic Program Chair
Dr. Wenchao Xue email: wenchao@ait.ac.th

Program Officer
Ms. Premma Rao email: premma@ait.ac.th

Website
https://ait.ac.th/program/environmental-engineering-and-management/
Facebook
https://www.facebook.com/eem.ait/

PROMINENT ALUMNI

Dr. Bindu Nath Lohani
Class of 1977, Nepal

Dr. Bindu Nath Lohani, a prominent figure in the field of development and finance. He served as the Vice President for Knowledge Management and Sustainable Development at the Asian Development Bank (ADB). Prior to that, he held various high-level positions at ADB, including Vice President for Finance and Administration and Chief Financial Officer. Lohani has extensive experience in international development and finance, particularly in Asia-Pacific region. He has contributed significantly to various initiatives aimed at promoting sustainable development, infrastructure financing, and knowledge sharing in the region.

Dr. Supat Wangwongwatana
Class of 1980, Thailand

Currently affiliated with the Faculty of Public Health, Thammasat University as a Senior Specialist in air pollution since 2017. He also serves as a Senior Advisor to the Thailand Environment Institute, a member of the Senate's Sub-commission on Environment, the Co-chair of the Advisory Group of Asian Co-benefit Partnership. He was the Director General of the Pollution Control Department (PCD) for 5 years. He was the first recipient of an Honorary Degree from USEPA's Air Pollution Training Institute. He was also awarded an Asian Air Quality Management Champion from the Clean Air Initiative for Asian Cities for his efforts to institutionalize air quality management in Thailand and for acting as a role model for air quality management practitioners in cities and countries across Asia.

QUOTE FROM STUDENT

Ms.Wipaporn Saweangwit
Thailand

"While the impact of the environment is borderless and there is a shortage of people to handle and fix the issues. Thus, education is the key to strengthening and improving people's abilities to overcome the current situation. The experience from the Environment Engineering and Management Program gave me academic knowledge and many opportunities that sparked an idea and enhanced competencies."

School of Engineering and Technology
Department of Water Resources and Environmental Engineering

WATER ENGINEERING AND MANAGEMENT (WEM)

Program Overview

The WEM program imparts education and training towards an understanding of the complexity of water cycle, utilization and management. It offers a balanced curriculum covering both engineering and management aspects of water resources. Students acquire knowledge and hands-on practice in tools and techniques to come up with viable and sustainable water management for water, food, energy and environmental security.

Key Courses

Five major areas are covered. These are Agricultural water, Coastal water, Urban water, Water resources, and Extreme events and risk management. Required courses that all students take are in Watershed Hydrology, Hydrodynamics, Water Resources Systems, Concepts in Water Modelling, Research Design and Experimental Methods.

Elective courses include Irrigation and Drainage Engineering, Coastal and Estuarine, Water Supply and Sanitation, River Engineering and Modeling, AI and Big Data in Water, Integrated Water Resources Management, Climate Change and Water Resources, Irrigation and Drainage Systems Management, Coastal Zone Management, Urban Drainage Management, Groundwater Development and Management, Modeling of Water Resources Systems, Flood Modeling and Management, EIA and GIS Applications in Water Resources, Sustainable Hydropower Development, and Earth Engine for Water Resources Monitoring and Management.

Research in Action

The WEM team at AIT is one of the active teams in conducting research, sponsored and consultancy-based projects. The current research from our WEM team includes assessment of groundwater sustainability in the special economic zone of Thailand for operational groundwater management such as Assessment of Groundwater Sustainability in the Special Economic Zone of Thailand for Operational Groundwater Management. Groundwater plays a crucial role in water security and has been stressed due to unprecedented population growth, rapid urbanization, changes in lifestyle, land use and climate change. Meanwhile, government initiatives like Special Economic Zones (SEZs) are expected to foster economic growth but are likely to limit equal access to water leading to sectoral conflicts. The project's major objective is to assess groundwater sustainability at the SEZ of Thailand and recommend strategies to enhance the guidelines and policies for improved operational groundwater management in SEZs.This project uses a well proven tool previously developed by the WEM team on Groundwater Sustainability Infrastructure Index (GSII).

Career Prospects

Our students are trained to acquire knowledge and skills in tools and techniques to come up with viable and sustainable solutions within the framework of the integrated water resources management at the river basin scale. Students are well trained with hands-on sessions to solve real world problems in the field of water resources.

The Career Center under Office of Student Affairs provides counseling and assessments that aids students in the decision-making process, to recognize their skills, values and interest towards their future goals. The Career Center team regularly organizes workshops on preparing for job interviews and resume/CV building tips. Career Center is also responsible for assisting students to gain valuable exposure through exchange and internship programs through different educational institutes and companies abroad. Some of the institutes and organizations for exchange and internships include,

- TU Dresden (TUD) and TU Braunschweig (TUBS), Germany
- University of Illinois at Urbana-Champaign (UIUC)
- Danish Hydraulic Institute (DHI), Denmark

Upon graduation, our students are placed in well renowned private and public organizations where they take leading roles and contribute to their organizations.

- Private Sector Engineers: Our graduates work in private companies such as water-related consultancy firms, hydropower companies and water supply plants.
- Public Sector Organizations: Our students join various government institutions related to the natural resources department, groundwater department, water resources department and irrigation department in their respective countries and work from field level planning to policy decision making.
- Post Graduate Studies: Most of our Master's graduates pursue their higher studies in well renowned universities across the globe specifically, in Europe, USA, Australia and Japan.
- Teaching: Students from WEM are professionally trained for teaching and research activities for the academic institutions. WEM alumni are playing productive and crucial roles in several academic institutions across the globe.

Faculty

The faculties of WEM program come from diverse backgrounds centered on water resources themes. Two of our faculty members have listed in the top 2 percentile scientists in the world in their respective fields. Research interests of WEM faculty include hydrologic and water resources modeling as applied to integrated water resources management, climate change impact assessment and adaptation in the water, groundwater assessment and management, irrigation water management, water quality of surface and groundwater systems, remote sensing applications in water resources and agriculture, satellite geodesy and remote sensing, land surface modeling, data assimilation and artificial intelligence.

CONTACT DETAILS

Academic matters
WEM Academic Program Chair
Dr. S. Mohana Sundaram
email: mohanasundaram@ait.ac.th

Administration matters
WEM program secretary
Ms. Yanee
email: yanee@ait.ac.th

Website
https://wem.ait.ac.th/

PROMINENT ALUMNI

Honorable Dr. Subin Pinkayan
Master's Degree in Hydraulics, Thailand
Former AIT Board of Trustees Chairman

Honorable Dr. Subin Pinkayan, AIT Alumnus and former AIT Board of Trustees Chairman. He held several positions in the past as a Professional Engineer, Businessman, Academician and Politician. Dr. Subin is currently active in public affairs and company business. He was a recipient of the 1991 Personal Service Award in national and international prestige honoured by Colorado State University and also a recipient of the 2003 outstanding alumni award in social achievement award honored by Asian Institute of Technology Alumni Association of Thailand.

Dr. Anat Arbhabhirama
Class of 1962, Thailand
AIT Board of Trustees Chairman

Dr. Anat Arbhabhirama, AIT alumnus from Water Resources Engineering (1962). Dr. Anat is currently the Chairman of the Management Committee & Member of Advisory Board at Bangkok Mass Transit System Public Company Limited, and the Vice Chairman of AIT Board of Trustees. He had an outstanding academic career at AIT as a former professor, former Division Chairman of Water Resources Engineering, and former Vice President for Academic Affairs. He has served in both the public and private sectors in high level positions.

QUOTE FROM STUDENT

Maria Anjelica P. Ancheta
Philipines

"My current PhD journey in WEM has been the best experience in my career. The mentorship, resources, and academic environment in WEM has helped me enhance my skills as a water resource professional. With the help of WEM, I have been exposed to various opportunities such as international conferences and other capacity-building activities that have helped me gain a more profound understanding of my field of expertise."

QUOTE FROM ALUMNI

Dr. Saurav KC
Class of 2019, Nepal
Deputy Executive Director, Center of Research for Environment, Energy, and Water (CREEW, NGO in Kathmandu, Nepal)

"Embarking on a transformative journey through the WEM program was a pivotal moment in my career. Armed with years of field experience, my Master's and Doctoral degrees at WEM, coupled with active involvement in diverse research projects alongside esteemed professors, not only elevated my academic competence but also nurtured my leadership and management acumen. Now, as a proud alum, I am thriving in a senior role within a prestigious organization, steering both national and international research initiatives. The WEM experience is not just an education; it is a catalyst for professional excellence and global impact."

School of Engineering and Technology
Department of Information and Communications Technologies

COMPUTER SCIENCE (CS)

Program Overview

The Computer Science program delivers a comprehensive education encompassing fundamental concepts in computing to cutting-edge applications. Through a combination of theoretical knowledge and practical projects, students are expected to engage in rigorous coursework and hands-on projects, gaining proficiency in programming, algorithms, artificial intelligence, and more. With a focus on problem-solving and innovation, our program is crafted to equip students with comprehensive knowledge and industry best practices, ensuring they are well-prepared to thrive in organizations and contribute to the betterment of sustainable society through technological advancements and innovation.

Key Courses

Algorithms Design and Analysis, Full Stack Application Development, Theory of Computing, Programming Languages and Compilers, The Semantic Web Technologies, Information Systems Development and Management, Software Architectural Design, Computer Networks, Advanced Topics in Internet Technology, Research Methods in Computing.

Research in Action

Our mission is to harness the power of computer science from theory to applications to propel society towards a sustainable future. By fostering innovation in areas of computing such as computer science and artificial intelligence, our program aims to develop solutions that address pressing global challenges. Through interdisciplinary collaboration and a commitment to ethical and responsible technology use, we aspire to empower individuals and communities, creating a harmonious balance between technological advancements and societal sustainability for the benefit of present and future generations.

Career Prospects

After graduating from CS Program, you can be fit to the following positions at international as well as regional level:

- Chief Technical Officer (CTO)
- Director of IT Department
- Software Architect
- Software Developer
- System Analyst

CONTACT DETAILS

Administrative Secretary
Ms. Siriporn Nanthasing
Tel: +66(0) 2 524 5700
email: siripornn@ait.ac.th

Ms. Sireekant Thanwongpan
Tel: +66(0) 2 524 5717
email: sireekant@ait.ac.th

Website
https://ait.ac.th/program/computer-science/

PROMINENT ALUMNI

Mr. Younten Tshering
Class of 2022, Bhutan

Mr. Younten Tshering, MsC in CS May 2022, Bhutanese. Current Position: Lecturer and Head of the Department of IT at Jigme Namgyel Engineering College, part of the Royal University of Bhutan.

QUOTE FROM STUDENT

Minn Banya
Myanmar

"Studying computer science at AIT has been nothing short of exhilarating. From delving into advanced algorithms to tackling real-world coding challenges, every day has been a journey of growth and discovery. The hands-on approach here has empowered me to turn theory into tangible solutions, preparing me to navigate the ever-evolving landscape of technology with confidence. But what truly sets AIT apart is its vibrant community of learners from around the globe. Interacting with peers from diverse backgrounds has not only enriched my academic experience but also broadened my cultural horizons. At AIT, I'm not just gaining a degree—I'm forging connections and shaping my future alongside the brightest minds in computer science. This is where innovation meets opportunity, and I'm proud to be part of it."

QUOTE FROM ALUMNI

Mr. Chokchai Phatharamalai
Class of 2008, Thailand
Agile Coach at ODDS, Thailand

"Sixteen years ago, when I first met my classmates, I was blown away by the various accents from India, Vietnam, Myanmar, and France. My English was not fluent at the time. During the two years of my Master's degree, I not only became familiar with different accents but also learned about diverse cultures from various countries. This has helped me tremendously in connecting with people around the world in my career"

School of Engineering and Technology
Department of Information and Communications Technologies

DATA SCIENCE AND ARTIFICIAL INTELLIGENCE (DSAI)

Program Overview

The DS&AI curriculum at AIT is designed to meet the increasing demands for Data Scientists and AI professionals in the region. Developed in partnership with 14 European and Asian institutions through the Erasmus+ Capacity Building for Higher Education initiative, the curriculum combines solid theoretical concepts with highly practical skills. Students gain hands-on experience tackling real-world problems through in-class projects, industrial internships, exchange programs, and research opportunities. The program focuses on building a strong foundation and in-depth understanding of essential subjects such as data modeling and management, machine learning, business analytics and intelligence, natural language understanding, and computer vision.

Key Courses

Machine Learning, Data Modeling and Management, Business Intelligence and Analytics, Computer Programming for Data Science and Artificial Intelligence, Artificial Intelligence: Knowledge Representation and Reasoning, Artificial Intelligence: Natural Language Understanding, Computer Vision, Recent Trends in Machine Learning.

Career Prospects

As soon as obtaining the Master degree in DSAI, you've equipped well enough to fit in the following positions: Chief Data Officer (CDO), Machine Learning Engineer, Data Scientist, Data Engineer, AI Researcher / Specialist in the current market of the region.

CONTACT DETAILS

Administrative Secretary
Ms. Siriporn Nanthasing
Tel: +66(0) 2 524 5700
email: siripornn@ait.ac.th

Ms. Sireekant Thanwongpan
Tel: +66(0) 2 524 5717
email: sireekant@ait.ac.th

Website
https://ait.ac.th/program/computer-science/

PROMINENT ALUMNI

Mr. Kanawut Kaewnoparat
Class of 2021, Thailand
AI & NLP Engineer at Omniscien Technologies, Thailand

QUOTE FROM STUDENT

Jurairat Prechasin
Thailand

"Pursuing a doctoral program in DSAI at AIT has transformed my academic and professional journey. Immersing myself in cutting-edge research projects has profoundly influenced my perspective and approach to technology. This hands-on experience with the latest advancements has not only enriched my understanding but also prepared me to contribute significantly to the evolution of global connectivity. It's been an adventure far beyond traditional study; it has been an expedition of exploration, innovation, and direct involvement in the AI technologies that are sculpting the future of data engineering."

QUOTE FROM ALUMNI

Mr. Kanawut Kaewnoparat
Class of 2021, Thailand
AI & NLP Engineer at Omniscien Technologies

"My journey at AIT was nothing short of remarkable. As an individual with an Arts background, AIT has proven to be the school of opportunities, embracing my transition into the Data Science and AI program with open arms. Beyond the intensive technical coursework, what has left a lasting impression is the sense of community and friendship that permeates AIT. Special acknowledgement goes to Dr. Chaklam and the AIT Brain Lab, where I had the privilege to learn and exchange ideas with brilliant minds, fostering an environment of intellectual growth. AIT has not only provided me with a solid academic foundation but also offered the chance to expand my horizons. Through the Dual-degree program, I spent a transformative year in France, experiencing unparalleled personal growth. Forever grateful for the supportive AIT and DSAI program family, I am confident that the skills and relationships cultivated here will continue to shape my future endeavors."

School of Engineering and Technology
Department of Information and Communications Technologies

INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)

Program Overview

The ICT field is a widely established area of study in response to the needs for the offering of a curriculum selectively drawn from the curricula of Telecommunications (TC), Computer Science, and Information Management (CSIM). With strong emphasis on communications aspects — rather than on the aggregation of hardware, software, networks, equipment and related industries — ICT recognizes the important role of information services and applications in the creation of a complete ICT infrastructure.

The ICT Program provides a broad perspective on the nature of technology, how to use and apply a variety of technologies, and the impact on self and society. Students gain knowledge and skills needed to effectively apply, use and manage technology when solving problems specifically related to information and communication.

Key Courses

Information and Communication Technology Applications: Users and Producers, Information and Communication Technology Applications: Project Design.

Elective courses: ICT Applications: Project Implementation, ICT Applications: Strategies and Technology Road-mapping, Selected Topic: Information and Communication Technology Applications: Users and Producers, ICT Applications: Project Design, ICT Applications: Project Implementation, Social Software for E-Learning, Design and Implementation Project of Mobile Phone Application, Network Simulation and Modeling Using NS2 (Network Simulator 2)

Research in Action

The focus themes related to this program are Telecommunications, Computer Science, Information Management, Information Services and Applications, ICT Infrastructure, Mobile Phone Application, and Information systems.

Some examples of papers that followed on from specific projects are:

i. Performance Improvement of a Random Access Channel Protocol over M2M Communications,

ii. A Class-based Adaptive QoS Control Scheme Adopting Optimization Technique over WLAN SDN Architecture

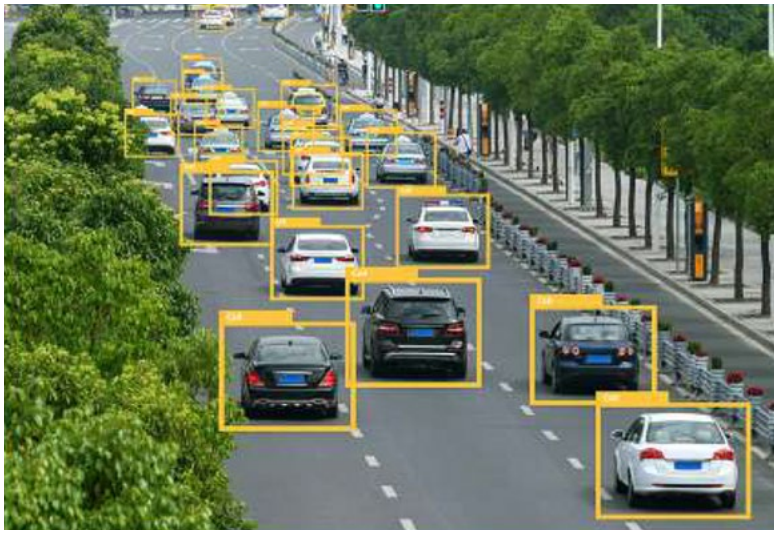
i. Prevention of 4 Disasters and Their Single Recovery Networks based on Internet-of-Things with Airborne Capability (PATRIOT-41R-Net) – ICT Virtual Organization of ASEAN Institutes and NICT (ASEAN IVO), Donor: NICT, Japan, total value USD 40,000

ii. Incident Reporting System for Traffic Clearance in Emergency Case.
Funding Source: National Electronics and Computer Technology Center (NECTEC)

iii. Microclimate Data Aggregation and Map Generation using Wearable Technology.
Funding Source: Asia-Pacific Tele-community (APT)

Career Prospects

As the IT job landscape continues to become more advanced and competitive, earning a degree from an accredited institution as AIT is one of the best ways to further your information technology expertise and set yourself apart from the competition. After graduation from ICT program, student can advance their technical expertise and emerge from the program to succeed in senior-level information technology positions such as: Information Security Manager, Computer and Information Research Scientists, Computer and Information Systems Manager, IT Director, Chief Information Officer (CIO), Chief Technology Officer (CTO), Network System Administrator, Data Architect.



CONTACT DETAILS

Academic matters
Dr. Teerapat Sanguankotchakorn
email: teerapat@ait.ac.th

Administration matters
Ms. Premma Rao
Tel: +66 (0)2 524 5733
email: premma@ait.ac.th

Website
https://ait.ac.th/program/information-communication-technologies/

School of Engineering and Technology
Department of Information and Communications Technologies

INFORMATION MANAGEMENT (IM)

Program Overview

The Information Management program provides a comprehensive foundation for students to navigate the intricate landscape of information and communication technologies within organizations. Focused on practical application, the curriculum emphasizes the development of policies to optimize benefits from widespread technology use in corporate and government settings. Additionally, the program equips students with the skills necessary for strategic management of information resources, spanning across business, government, and non-profit sectors, fostering a holistic approach to information management in the modern digital era.

The Information Management curriculum at AIT is designed to equip students with the knowledge and skills needed to effectively manage and secure data for an organization. The program combines foundational courses in information management with specialized courses focusing on business transformation, data science and AI applications, and technology governance. Students will learn to optimize the use of information resources and technologies, develop effective technological strategies, and drive innovation and productivity within various organizational contexts. Students gain hands-on experience through case studies, in-class projects, workshops, seminars, industrial internships, exchange programs, and research opportunities. This comprehensive approach prepares students to address complex challenges across business, government, and non-profit sectors.

Key Courses

Data Modeling and Management, Business Intelligence and Analytics, Information Systems Development and Management, Human-Computer Interaction and Information Visualization, E-Business Development and Technology, Seminar in Electronic Government, Information and Communication Technology Applications: Project Design, Applied Data Analytics

Research in Action

Our mission is to leverage the capabilities of information management and technology to foster a sustainable and equitable future for society. Through the responsible collection, analysis, and dissemination of information, our program strives to empower individuals and organizations to make informed decisions that positively impact society and economic well-being. We are committed to develop innovative solutions that promote transparency, ethical data practices, and strategic management of information in business, government, and non-profit organizations, ultimately contributing to a resilient and sustainable global community.

Our recent research publications related to the above topics are: (i) applying an evidence-based learning analytics intervention to support computer programming instruction, Smart Learning Environments, and (ii) A Conceptual Model for Development of Small Farm Management Information System: A Case of Indonesian Smallholder Chili Farmers.

Career Prospects

As soon as obtaining the Master degree in IM, you've equipped well enough to fit in the following positions across the region: Chief Information Officer (CIO), IT Consultant, Business Analyst, Data Analyst, Data Engineer.

CONTACT DETAILS

Administrative Secretary
Ms. Siriporn Nanthasing
Tel: +66(0) 2 524 5700
email: siripornn@ait.ac.th

Ms. Sireekant Thanwongpan
Tel: +66(0) 2 524 5717
email: sireekant@ait.ac.th

Website
https://ait.ac.th/program/information-management/

PROMINENT ALUMNI

Ms. Rassarin Chinnachodteeranun
Class of 2007, Thailand
CEO of ListenField, Thailand

QUOTE FROM STUDENT

Ms. Richa Kakati
India

"Coming to AIT may have been one of the best decisions of my life. It introduced me to a world filled with excitement, laced together with knowledge that is always delivered with the utmost care and love. My journey here has been so fulfilling so far that this place will always hold a special place in my heart. The people I have met here in AIT, including my professors and peers, have all given me something to learn from them."

QUOTE FROM ALUMNI

Ms.Panunsiya Rawira
Class of 2023, Thailand
Project Manager, Computer Processing Officer 7, Metropolitan Electricity Authority

"I embarked on my journey toward a master's degree in the Information System Development Department at AIT. This place has been a guiding force for me. I've made friends from various countries, exchanged cultures and experiences, and practiced working together as a team, adding a delightful dimension to my academic experience. It was fun, though studying was not easy—never easy, but undoubtedly worth it.

During this time, a pivotal piece of advice from my advisor reshaped my perspective: 'Take your time.' Those three words completely shifted my attitude, and I've carried them with me ever since. I want to express my sincere thanks to my advisor, mentors, and the amazing AIT staff. Their guidance has played a significant role in shaping my educational journey. AIT is more than just a place of learning; it has been the driving force behind a substantial transformation in my life. The best parts of my life until now have started from AIT"

School of Engineering and Technology
Department of Information and Communications Technologies

INTERNET OF THINGS (IOT) SYSTEM ENGINEERING

Program Overview

Embark on an exciting journey in Internet of Things Systems Engineering, where innovation meets excellence. Explore the dynamic field of IoT through hands-on courses that cover technology, design, wireless technologies, cloud computing, and IoT security. Our program offers a diverse range of elective courses, providing students with a well-rounded education that prepares them for a future at the forefront of connected technologies. With a strong emphasis on hands-on experiences, our curriculum is tailored to foster both practical skills and a solid foundation for research and development. Dive into the world of smart systems based on IoT and machine learning and join us in shaping the future of Internet of Things Systems Engineering.

Key Courses

Internet of Things Technology and Design, Wireless Technologies for Internet of Things, Machine Learning, Embedded System Architecture, Embedded System Design, Cloud Computing, IoT Security.

Research in Action

Our research spans various domains, contributing to advancements in Health/Medical Monitoring and Diagnosis, creating revolutionary Assistive Technologies, and enhancing connectivity through Advanced Wireless Communications. We ensure the integrity of critical infrastructures with our expertise in Structural Health Monitoring. In the industrial sector, we lead the way in the Industrial Internet of Things (IIoT), transforming industries through connected technologies. In Smart Agriculture, our research optimizes farming practices, while our work in Music Entertainment explores novel ways technology can enhance the music experience. Additionally, our focus on Smart Energy aims at sustainable solutions for powering the future.

Examples of the completed project recently:

i. Prevention of 4 Disasters and Their Single Recovery Networks based on Internet-of-Things with Airborne Capability.

ii. Reliable Technologies and Models for Verified Wireless Body-centric Transmission and Localization (ROVER) project.

Join us on this transformative academic journey, where 'Research in Action' is not just a concept but an integral part of shaping the future of Internet of Things Systems Engineering.

Career Prospects

After graduating, you can be confident to step into the workforce as highly sought-after professionals, ready to make their mark across diverse industries:

- IoT Solutions Architect: Design and implement cutting-edge solutions, seamlessly integrating the power of IoT.
- AI and Machine Learning Engineer: Drive innovation by applying advanced AI and machine learning techniques to IoT systems.
- Wireless Communication Specialist: Pave the way for communication network evolution as a wireless technology expert.
- IoT Security Analyst: Safeguard connected systems, contributing to the resilience of IoT infrastructures.
- Healthcare Technology Consultant: Shape the future of healthcare with IoT-driven medical monitoring, diagnosis, and assistive technologies.

CONTACT DETAILS

Administration matters
Ms. Premma Rao
Tel: +66 (0)2 524 5733
email: premma@ait.ac.th

Website
https://ait.ac.th/program/internet-of-things-iot-systems-engineering/

PROMINENT ALUMNI

Mr. Kalapatapu V S K R Shiva Kumar
Class of 2022
Doctoral Fellow on Brain Tumor Radiogenomics using AI at Amrita Vishwa Vidyapeetham – Apollo - Exsegen, India

QUOTE FROM STUDENT

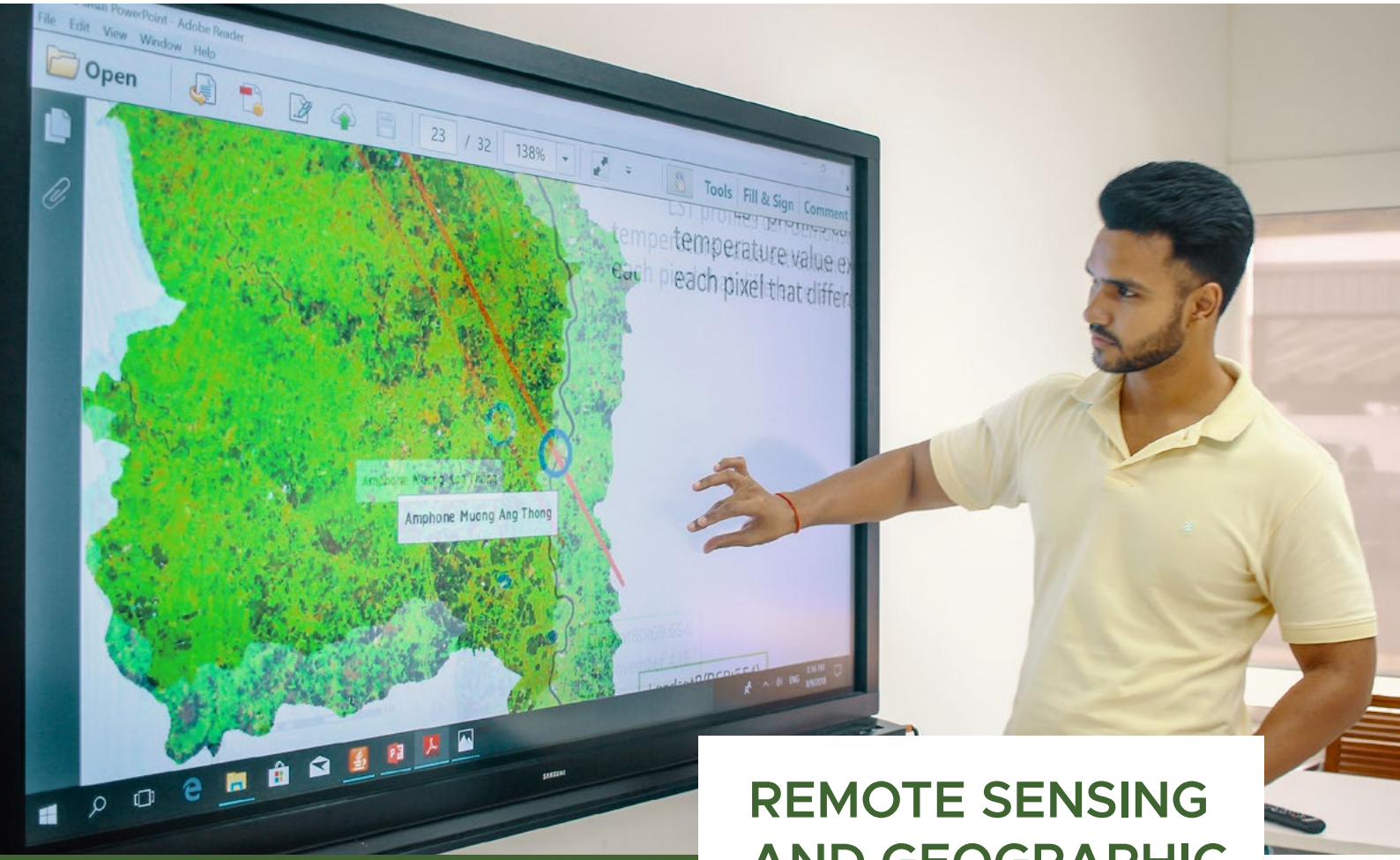
Mr. Srijan Ghimire

"I feel incredibly fortunate to have experienced a transformative learning journey in the IoT Systems Engineering program at AIT. As a tech enthusiast, the real-time applicability of the curriculum has been instrumental in broadening my skill set and understanding. From day-to-day applications to industrial solutions, the program's emphasis on connectivity in diverse scenarios has reshaped my perspective on the immense potential of IoT. During my master's, the program not only kept me updated on cutting-edge technologies but also fueled my curiosity, fundamentally changing my approach towards technology. The program offered a remarkable platform for research in IoT systems engineering, allowing me to contribute, learn, and grow both academically and professionally.."

QUOTE FROM ALUMNI

Mr. Aung Kaung Myat
Class of 2023, Myanmar
Doctoral Student and Research Engineer Télécom SudParis, France

"The increasing connectivity of IoT devices to the internet, coupled with advancements in Artificial Intelligence, presents significant business opportunities in sectors such as automation, healthcare, agriculture, industrial manufacturing, and environmental monitoring. IoT systems engineering is a program focused on creating seamless integration between intelligent and autonomous software and hardware devices. Participating in this program has taught me how to transform my ideas into designs and, ultimately, into finished products. The extensive hands-on lab sessions have provided me with the essential skill set and knowledge required for the industry."



School of Engineering and Technology
Department of Information and Communications Technologies

REMOTE SENSING AND GEOGRAPHIC INFORMATION SYSTEMS (RSGIS)

Program Overview

The RS&GIS program at the Asian Institute of Technology is designed to provide a comprehensive understanding of Remote Sensing and Geographic Information Systems, emphasizing both theoretical knowledge and practical applications. With a focus on space technology, students gain expertise in capturing and analyzing digital spatial data through airborne and spaceborne sensors, while also addressing contemporary challenges such as big geospatial data handling and cloud-based applications. The program covers fundamental and advanced topics, including earth energy interaction, geostatistics, UAV data acquisition and processing, InSAR processing, GNSS technology, WebGIS, and the integration of GIS, remote sensing, and GNSS for diverse applications.

Why Remote Sensing and GIS Program?

- 9% Job Growth: Surpassing the 4% average, the U.S. Bureau of Labor Statistics projects a 9% increase in geospatial industry jobs over the next decade.
- Strategic Investments: CARTO reports increased investments by private and public sectors, ensuring a thriving career path.
- Global Surge: The Global Geospatial Data Analytics Market is set to grow by $80.74 billion, presenting a 16.43% CAGR during 2022-2026.
- Asia's Boom: Join the demand for geospatial professionals in Asia, as witnessed by our successful graduates in top organizations.

Key Courses

Geographic Information Systems, Remote Sensing, Digital Image Processing in Remote Sensing, Web GIS Technology, Introduction to Global Navigation Satellite Systems, Principles and Application of InSAR, Remote Sensing Data Analysis, Free Open Source for Software and for Geospatial Analysis, Geospatial Modeling for Environment, Unmanned Aerial Vehicle Application and Processing, Advance Spatial Analysis Methods, Positioning and Location Based Services Technology

Research in Action

The RSGIS program at AIT is dedicated to advancing research and technology to tackle environmental and societal challenges. The program's research is underpinned by several notable research areas:

- Environmental Monitoring and Climate Impact Assessment: This research area investigates how land use and climate variability impact natural and built environments. For example, the project titled "Assessment of Environmental Inequalities of Air Pollution of Vulnerable Socioeconomic Groups in the World of Work in Bangkok City, Thailand" uses advanced geospatial and earth observation technologies to monitor and analyze environmental changes caused by air pollution among vulnerable groups in Bangkok.
- Geospatial Data Science in Crop Type and Yield Monitoring: This area focuses on developing innovative methods to monitor and predict crop types and yields to enhance agricultural productivity. The Mitr Phol Sugarcane Research Center sponsored a project titled "SMART Surveillance and DSS for Cane Monitoring and Management," which exemplifies this research. It utilizes geospatial data to create surveillance and decision support systems for cane monitoring and management, thereby improving agricultural outcomes.
- Geospatial Data Infrastructure Development: Strengthening frameworks that support multiple applications is crucial for improving data accessibility, integration, and usability in decision-making. The project "Development of UAV Data Transmission and Smart Survey System," sponsored by the University of Tokyo, aims to enhance geospatial data collection and analysis by developing advanced UAV data transmission systems.
- Mobility Data Analysis: This area focuses on optimizing urban planning and transportation through the analysis of mobility patterns. The Bangchak Corporation Public Company Limited sponsored a project titled "Truck Mobility Data Analysis for Reducing Carbon Emission," which uses truck mobility data to develop strategies for reducing carbon emissions in urban transport, promoting sustainability.
- Climate Change Risk Assessment for Southeast Asian Lakes (CCRASEAL): This project, funded by the Asia-Pacific Network for Global Change Research (APN), employs advanced geospatial technologies to monitor and analyze the environmental impacts of climate change on Southeast Asian lakes.
- Big Earth Data for Sustainable Development Goals: This area focuses on supporting sustainable development by using big earth data. The project "Application of Big Earth Data in Support of the Sustainable Development Goals in Thailand," funded by the National Research Council of Thailand (NRCT), monitors and assesses progress toward sustainable development goals in Thailand, providing policymakers with valuable insights.

Career Prospects

Shape your future in fields such as retail, public health, emergency management, transportation, climate adaptation, and urban planning. Sought-After Roles that we see graduates entering include Geospatial Data Scientist, Geospatial Analyst, Data Visualization Software Engineer, Remote sensing and GIS specialist, Spatial Data Engineer.

CONTACT DETAILS

Administration matters
Ms. Sukanya Hnooma
Tel: +66 (0)2 524 5577
email: sky@ait.ac.th

Website
https://ait.ac.th/program/remote-sensing-and-geographic-information-systems-rs-gis/

PROMINENT ALUMNI

Dr. Chairath Sirirattanapol
Class of 2014 and 2019, Thailand
CTO (Chief Technology Officer) and Research & Development (R&D) Manager, New Space Intelligence, Japan

QUOTE FROM STUDENT

Ms. Nguyen Thi Minh Trang
Vietnam

"Studying in the RSGIS program at AIT has been transformative. The curriculum's focus on geospatial technologies, from GIS fundamentals to advanced remote sensing, has provided a solid foundation. What sets this program apart is its practical approach. Lab sessions and fieldwork have allowed me to apply theory to real-world scenarios. The faculty are not just experts but mentors, guiding us towards success. The multicultural environment has broadened my perspectives. Overall, RSGIS has equipped me with technical skills and a supportive community. It's been an enriching experience, preparing me for a rewarding career in geospatial technology"

QUOTE FROM ALUMNI

Mr. Ye Lin Tun
Class of 2021, Myanmar
GIS & Remote Sensing Specialist at Airbus Defence and Space

"Airbus is a pioneer in aerospace technology, with over 50 years of experience in developing advanced satellite systems. They have delivered over 70 Earth observation satellite systems, accumulating nearly 600 years of in-orbit experience. Ye Lin Tun plays a crucial role in the AIP project under THEOS2 Satellite of GISTDA in Thailand, focusing on providing global and macro indicators for actionable policy insights in NAN (Wealthy Life on Green) and the Eastern Economic Corridor (Water Shortage)"

TELECOMMUNICATION (TC)

School of Engineering and Technology
Department of Information and Communications Technologies

Program Overview

Embrace the forefront of technological innovation in our Telecommunications Academic Program, specializing in areas such as wireless communication systems, relevant signal processing, network planning, and smart systems with a strong emphasis on research and engineering excellence. Our graduates excel as key contributors to high-level technical planning and management operations, leveraging their skills in telecommunications software development and a solid foundation in engineering principles. Become a part of a community dedicated to shaping the future of telecommunications through cutting-edge research and hands-on engineering expertise.

"Joining our Telecommunications program is not just an academic choice; it's a gateway to a vibrant community of diverse faculty who share a passion for innovation. As a professor, I'm excited to guide and inspire the next generation of telecom experts. Together, let's explore the limitless possibilities in this dynamic field and shape the future of communication technology. Welcome to a journey where diversity fuels creativity, and every student's unique perspective adds to our collective success! Embrace a balanced approach to life and study — it's not about working hard but working efficiently to cultivate both personal well-being and academic success." Dr. Attaphongse Taparugssanagorn, School of Engineering and Technology, Department of ICT.

Stochastic Processes, Data Communications, Optimization for Communications and Networks, Stochastic Networks.

Research in Action

1. Advanced Wireless Communications (PHY, MAC, and Network Layers): Uncover the secrets of wireless communication evolution as our research delves into the intricacies of the physical (PHY), medium access control (MAC), and network layers. Stay at the forefront of technology with a focus on advancing wireless communications, including the revolutionary 5G and beyond.

2. Smart Systems with Signal Processing and AI: Experience the intersection of signal processing and artificial intelligence in the development of smart systems. Our research not only explores theoretical advancements but also actively contributes to practical applications, from intelligent network planning to enhancing management operations.

3. IoT Smart Systems and AI Applications: Witness the transformative power of IoT smart systems and AI across diverse applications. Engage in research that goes beyond the conventional, making a profound impact not only in fields such as healthcare, entertainment (e.g., music, sport), and structural health monitoring but also transcending boundaries to be applied across a myriad of applications.

Example of projects that have been done recently is TV White Space (Unused TV band) Measurement and Communications, 2017-2018. The project was aimed at designing a low cost, portable TV white space measurement system, conduct the measurement campaigns in rural, urban, and suburban areas, analyze the measured data, and implement new sensing methods and implement a cognitive radio communication system using TV white space.

Career prospects

Our program provides a solid foundation for a successful and fulfilling career, empowering you to make a lasting impact in the dynamic field of Telecommunications. Choosing our Telecommunications program opens the door to a diverse array of exciting career prospects, where graduates emerge as highly sought-after professionals equipped with the skills to excel in today's dynamic technological landscape. Career Paths can be seen as:

- Wireless Communications Engineer: Spearhead advancements in wireless technologies, contributing to the evolution of communication networks.
- Telecommunications Software Developer: Design and implement cutting-edge software solutions, ensuring the seamless operation of telecommunications systems.
- Network Planning Specialist: Play a crucial role in the strategic planning and optimization of communication networks for efficiency and reliability.
- Telecommunications Manager: Lead high-level technical planning and management operations within organizations, ensuring effective deployment and maintenance of telecommunications systems.
- Signal Processing Engineer: Contribute to the development of advanced signal processing techniques, shaping the future of digital communication systems.
- IoT Solutions Architect: Design innovative solutions at the intersection of telecommunications and the Internet of Things, contributing to the next generation of smart systems.
- AI in Telecommunications Specialist: Apply artificial intelligence in telecommunications, enhancing efficiency, automation, and smart decision-making processes.
- Cybersecurity Analyst for Telecommunications: Safeguard communication networks and data integrity by implementing robust cybersecurity measures.

CONTACT DETAILS

Administration matters
Ms. Premma Rao
Tel: +66 (0)2 524 5733
email: premma@ait.ac.th

Website
https://ait.ac.th/program/telecommunications-tc/

PROMINENT ALUMNI

Dr. Juthatip Wisanmongkol
Class of 2022, Thailand
Researcher, Automatic Identification System Research Team, National Electronics and Computer Technology Center (NECTEC), Thailand.

QUOTE FROM STUDENT

Mr. Weeraphat Tulathon
Thailand

"Going for a master's in telecommunications program at AIT has been a game-changer. It threw me into the world of cool research projects. Getting hands-on with the latest stuff has totally shaped how I see things. Now, armed with this degree, I'm all set to jump into the exciting field of pushing the boundaries of global connectivity. It's been more than just hitting the books; it's been this wild ride of exploring, discovering, and actually being a part of the tech that's shaping the future of telecom engineering."

QUOTE FROM ALUMNI

Dr. Su Pyae Sone
Class of 2016 and 2018, Myanmar

"My journey at AIT in Telecommunications has been the cornerstone of my academic and professional success. Under the mentorship of esteemed professors, I explored deep into the physical layer of wireless communication, igniting a passion that led to significant contributions in the field. The opportunity to participate in the Japan-Asia Youth Exchange Program in Science at Ochanomizu University, Tokyo Japan, further enriched my academic experiences, opening doors to international collaboration and cultural exchange. It is at this institute where I not only sharpened my technical skills but also developed a robust foundation for my research career."

School of Environment, Resources and Development
Department of Food, Agriculture and Natural Resources

AQUACULTURE AND AQUATIC RESOURCES MANAGEMENT (AARM)

Program Overview

AARM is committed to improving regional institutional capacity in aquaculture and aquatic resources management and related fields through innovative approaches that integrate education, research, and outreach activities on sustainable management of fisheries, and aquaculture. At the core of our mission is the continuous exploration of cutting-edge technologies, which we incorporate into innovative production management practices and aquatic animal health management. This underscores our steadfast commitment to the development of creative technologies, fostering effective industrial collaborations, and cultivating graduates with leadership excellence. Aquaculture and aquatic food systems encompass crucial elements of science, engineering, technology, and management, all integral to the program's curriculum.

Key Courses

Cleaner Aquaculture Systems, Health Management in Aquaculture, Applied Genetics in Aquaculture, Advanced Aquaculture Hatchery Management, Aquaculture Nutrition and Feed Technology, Applied Microbiology and Biotechnology in Aquaculture, Coastal and Inland Fisheries Management, Research Methodologies in Aquaculture and Fisheries Management, and Aquaculture Business Management.

Elective courses: Applied Genetics in Aquaculture, Aquaculture Nutrition and Feed Technology, Sustainable Seafood Business, Applied Microbiology and Biotechnology in Aquaculture

Research in Action

AARM pioneers in formulating science and society-based solutions aimed at addressing key challenges in the management of aquaculture and aquatic resources on a regional and global scale. Leveraging over four decades of expertise, our accomplished team is actively engaged in safeguarding the long-term sustainability of tropical aquaculture and aquatic resource management systems. Through the development and implementation of essential tools, we strive to foster innovative practices and advance the future sustainability of aquatic food systems and associated value chains.

The AIT Aquaculture research centers on the development of cutting-edge technologies for environment-friendly aquaculture production systems for energy, nutrient, and water conservation. It develops and promotes greener aquaculture technologies for better health management, Nutrition, and genetic stock improvement towards sustainable production, and to better place its graduates in the emerging job markets.

A sample of our research topics are:

i. Physiological, biochemical and genetic responses of black tiger shrimp (Penaeus monodon) to differential exposure to white spot syndrome virus and Vibrio parahaemolyticus.

ii. Effect of stocking density and tank color on nursery growth performance, cannibalism and survival of the Asian seabass Lates calcarifer (Bloch, 1790) in a recirculating aquaculture system.

Career prospects

AARM graduates enjoy a diverse array of employment opportunities. They are well-equipped for various career paths, including roles as university faculty and scientists engaging in research and experiments on farms to enhance harvests and control diseases. They may also contribute to reputable research organizations, addressing cutting-edge issues in aquatic food production and consumption. With proficiency in engineering and technology, our alumni are capable of designing, constructing, and maintaining aquaculture farms and water systems. Serving as specialists in aquatic food systems, they can focus on developing marketable products such as tilapia and catfish filets, along with processed shrimp and prawn packs. Furthermore, graduates specializing in fisheries management play a crucial role in developing sustainable resource management plans and enhancing the resilience of fishing communities. Many AARM graduates have also established successful businesses worldwide.

CONTACT DETAILS

Academic Program Chair
Dr. Krishna R. Salin
email: salinkr@ait.ac.th

Administrative Secretary
Ms. Supattra Sukasem
email: supattra@ait.ac.th

Website
https://aitaquaculture.org/
https://ait.ac.th/program/aquaculture-and-aquatic-resources-management/

PROMINENT ALUMNI

Prof. Dr. Nguyen Thanh Phuong
Class of 1992, Vietnam
Chairman, Can Tho University Board of Trustees and Member of the 13rd ,14th and 15th National Assembly, Vietnam New Space Intelligence, Japan

He has been leading 13 domestic scientific research projects and 15 international cooperation. He is the author and co-author of 120 articles in domestic journals and 100 articles in international journals.

QUOTE FROM STUDENT

Mr. Nguyen Tien Vinh
Vietnam

"Studying with the AARM program was a memorable journey for me. I loved the teaching style that motivated me to maximize my potential and improve my skills. People at the AARM Program were always supportive and friendly."

QUOTE FROM ALUMNI

Ms. Andrea Nathaly Pardo Valarezo
Class of 2019, Ecuador

"Studying at AARM, AIT in Thailand transformed my life. It taught me the power of teamwork and empathy. I could grow as a researcher, farmer-entrepreneur, and global citizen, helping me to gain essential business skills. My goal is to make meaningful contributions to sustainable advancements in aquaculture by collaborating with others to create positive change."

School of Environment, Resources and Development
Department of Food, Agriculture and Natural Resources

AGRI-BUSINESS MANAGEMENT (ABM)

Program Overview

The agro-industries contribute to the growing industrialization of developing countries, which in itself also leads to the increasing importance of agri-products. The management of agribusinesses requires a holistic skill set to navigate challenges posed by the inherently unpredictable nature of agricultural products and government policies. Agribusiness management has far-reaching consequences for many sustainable development goals, including but not limited to SDG1 (no poverty), SDG2 (zero hunger), SDG3 (good health and well-being), SDG5 (gender equality), SDG6 (clean water and sanitation), SDG8 (decent work and economic growth), SDG9 (industry, innovation, and infrastructure), SDG12 (responsible consumption and production), SDG13 (climate action). Thus, there is a need for sustainable transformation of agro-food enterprises which requires a new breed of agribusiness managers.

This program therefore caters to the unique needs of agribusiness professionals by equipping them with the knowledge and skills required to excel in globally competitive agro-industries. Our graduates are market-ready to enhance the performance of small, medium, and large-scale enterprises. The agribusiness managers trained at AIT are market-ready to enhance the performance of small, medium, and large-scale enterprises. We also aim at enhancing entrepreneurship among primary producers of agri-food products, processors, and other market intermediaries in the value chain.

Key Courses

Required courses: Agribusiness Management: Principles and Practices, Safety and Standardization of Food Products, Agri-Food Supply Chain Management, Marketing Management and Trade Policies in Agribusiness, Applied Managerial and Agribusiness Economics, Agro-Industrial Development, Statistical Methods for Research in Agribusiness, Analytical Techniques and Decision Tools for Agribusiness.

Selective courses: Agribusiness Management: Principles and Practices. Marketing Management and Trade Policies in Agribusiness, Agro-Industrial Development, Statistical Methods for Research in Agribusiness.

Research in Action

The ABM program research focuses on sustainable processes to enhance the performances in small, medium and large scale enterprises in the globally competitive agricultural-based industries. Agribusiness Management also aims at enhancing entrepreneurship among primary producers of agri-food products, and traders and other market intermediaries in the value chain.

Career prospects

Our graduates find placements in several sectors, including industries, government agencies, non-governmental organizations, academia, and entrepreneurship.

QUOTE FROM STUDENT

Ms.Tina Marie Rodvong
Thailand

"AIT is a place for integration agribusiness management where we can combine technology industry and education, bringing solutions that work. We can test and learn about successes and failures from examples around the world. Smart agriculture with smart planning and development will improve productivity safety and the standards in Thailand and globally."

QUOTE FROM ALUMNI

Ms. Khwanchol Kampan
Class of 2018, Thailand

"I am doing research in business management. My research focuses on developing policy use and understanding the advanced attitudes and perceptions of a great supply chain stakeholder in the new technology like blockchains in order to advance the values and quality of food. My research, including the publication "Adoption of Blockchain Technology for Enhanced Traceability of Livestock-Based Products," reflects my commitment to integrating innovative solutions to improve industry practices."

CONTACT DETAILS

Academic matters
Head of FANR Department
Prof. Avishek Datta
Tel: (66-2) 524-5479
email: datta@ait.ac.th

Administration matters
Ms. Manyuda Udomvatchararasameeo
Tel: (66-2) 524-5450
email: manyuda@ait.ac.th

Website
https://ait.ac.th/program/agri-business-management/

School of Environment, Resources and Development

Department of Food, Agriculture and Natural Resources

AGRICULTURAL SYSTEM AND ENGINEERING (ASE)

are offered in this program, Agricultural Systems (AS) and Agricultural Engineering (AE). Students are trained to develop, adopt, and disseminate knowledge that focus on the utilization of technologies and management of biological and agricultural systems and natural resources. Both AS and AE are in a productive alliance to complement each other within the wide spectrum of activities being undertaken at Agricultural Systems and Engineering. The ASE places its emphasis on sustainable agricultural development based on a holistic understanding of agronomic and biophysical production factors, from the perspective of producers and the effects of economic and social forces on agricultural enterprises. It highlights the application of biological sciences, engineering, socio-economic policies and programs, and support services to agriculture to increase the efficiency of agricultural production systems through availability and efficient use of inputs and management of natural resources.

Key Courses

Agricultural Systems Analysis, Design and Testing of Agricultural Equipment, Agricultural Environments, Crop Productivity Management, Farm Management Economics, Precision Agriculture, Agricultural Soil Mechanics, Instrumentation and Measurement Techniques, Controlled Environment Agriculture, Crop Eco-physiology and Modeling, Integrated Pest Management, Agricultural Sector and Policy Analysis, Sustainable Agriculture: Production, Operations & Systems, Sustainable Agriculture and Ecological Farming, Smart Irrigation System, Remote Sensing & GIS Applications in Agriculture.

Elective courses: Agricultural Environments, Agricultural Systems Analysis, Crop Productivity Management, Statistical Methods for Research in Agribusiness

Research in Action

Our research includes applied investigations into Crop Water Management, Crop Tolerance to Soil and Environmental Stresses, Climate Change Adaptation and Food Security, Smart Agriculture, Sustainable Crop Production, Conservation Agriculture, Crop Nutrient/Pest Management, Precision Agriculture, Cropping System Modeling, IoT and Drones in Smart Agriculture, On-Farm Irrigation Water Management, Artificial Intelligence and Big Data in Agriculture and Remote Sensing and GIS Applications in Agriculture.

A sample of specific applied projects are:

i. Comparing farmers' perceptions of climate change with meteorological trends and examining farm adaptation measures in hazard-prone districts of northwest Bangladesh

ii. Foliar application and seed priming of salicylic acid affect growth, fruit yield, and quality of grape tomato under drought stress.

iii. Regenerative Agriculture in ASEAN: Promoting Nature-positive Solutions for Rice Production

Career Prospects

With the increasing focus on sustainable agriculture and technological advancements in the industry, the demand for agricultural engineers is expected to grow. Future prospects include opportunities in agritech startups, research and development, education, and consultancy sectors. Particularly, as soon as you complete the ASE program in AIT, you will be able to work at the international level of project managers, lead engineers, specialists in areas like irrigation technology, or roles in research and development. You may also find opportunities in education, consultancy, or entrepreneurship.

CONTACT DETAILS

E-mail
FAB-HOD@ait.ac.th

Website
https://ait.ac.th/program/agricultural-systems-and-engineering/

PROMINENT ALUMNI

Prof. G.A.S. Ginigaddara
Class of 2009, Sri Lanka
Vice-Chancellor, Rajarata University of Sri Lanka

She gained Recognition award who have published the highest number of indexed journal articles, in 2021, Vice-Chancellors' Awards, Rajarata University of Sri Lanka; and had the highest number of citations, 2021, Vice Chancellor's Awards, Rajarata University of Sri Lanka.

School of Environment, Resources and Development
Department of Food, Agriculture and Natural Resources

FOOD ENGINEERING AND BIOPROCESS TECHNOLOGY (FEBT)

Program Overview

AARM is committed to improving regional institutional caThis program focuses on the application of engineering principles to the design and optimization of food production processes, ensuring the efficient and sustainable manufacturing of safe and nutritious food products. Students in Food Engineering & Bioprocess Technology gain hands-on experience in process engineering, quality control, and the utilization of biotechnological tools, preparing them for roles in the food industry where they contribute to the advancement of sustainable and resilient food systems.

Key Courses

Food Process Engineering, Postharvest Engineering, Bioprocess Technology, Bioreactor Design and Control, Food Engineering Operations, Numeral Computations in Food Process Engineering, Engineering Properties of Food Materials, Food Process Engineering Laboratory, Bio separation Processes, Advanced Bioprocess Technology Applications, Bioprocess Practical, Processing Effects on Functional Components of Foods, Sustainable and Safer Food Processing, Industrial Microbiology, Enzyme and DNA Technology, Dairy and Meat Biotechnology, Innovations in Safety and Quality in Food Production Systems, Methods in Bioprocessing and Molecular Biology, Molecular Nutrition, and Food Toxicology and Health.

Research Focus

Research linked to this program included Novel Food Processing Technologies, Mathematical Modeling of Foods and Food Processes, Chemical Sensors and Biosensors for Food Safety Applications, Postharvest Technology, Edible Packaging and Bio-Packaging, Probiotics, Functional Foods, and Nutraceuticals, Safety, Risk Assessment, and Value-Chain Analysis in Food and Natural Products, Food and Pharmaceutical Biotechnology, Nanotechnology in Food and Pharmaceutical Applications, Delivery and Controlled Release of Bioactive and Live Cells in Food and Nutraceuticals.

A sample of specific related projects includes:

i. Recycling and value addition of fish skin waste to produce bioactive peptides. (Preliminary study). Sponsor: Centers for Global Advancement and International Affairs

ii. Development of photoactivated Antimicrobial Bio-nanocomposite Packaging Materials.

iii. Adopting Circular Bioeconomy in Thailand Food Supply Chain through Industry Academia Collaboration (PI) an interdisciplinary and transnational project is aiming to facilitate transformational change in Thai food supply chain from linear to circular using a holistic approach by enhancing safety, quality, and efficiency of the food supply chain and identify how to turn food waste to valuable resources through valorization.

Career Prospects

Careers arising from this program are in a variety of interesting paths, especially as the world's population continues to grow, and there is an increasing focus on sustainable food production and biotechnology. Examples include Food Process Engineers (who design, develop, and improve processes and equipment used in food production), Product Development Scientists work on creating new food products or improving existing ones) Quality Assurance/Quality Control (QA/QC) Specialists (who ensure that food products meet quality and safety standards), Research Scientists, Bioprocess Engineers (who develop and optimize processes for the production of biological products, such as pharmaceuticals, biofuels, and bioplastics), Food Safety Specialists, Sustainability Consultants and Entrepreneur/Startup Founder (for example developing and selling innovative food products, offering consulting services, or providing specialized equipment or technology solutions to the food industry).

PROMINENT ALUMNI

Prof. Udaya Sanjeewa Kumara Rathnayaka
Class of 2009, Sri Lanka
Professor & Former Vice Chancellor, Sabaragamuwa University, Sri Lanka

QUOTE FROM STUDENT

Mr. Chaipakorn
Thailand

"This program isn't just about equations and theories; it's about unlocking the secrets of nature to create healthier, tastier, and more sustainable food products. From fermentation to food preservation, every lesson fuels my passion to engineer a brighter future for global food systems."

QUOTE FROM ALUMNI

Mr. Tay Zar Aye Cho
Class of 2019, Myanmar
Researcher at Charoen Pokphand (CP) Foods

"Industrial application of academic findings is one of the core values in FEBT & FINH. Being able to investigate the molecular interactions between nutrients and their respective transporter genes in chickens, my doctoral dissertation in FEBT contributed a direct impact on the poultry industry by saving diet preparation cost and reduction in phosphorus overload in soil. It is truly fascinating to see how the studies here are tailored to fit the industrial requirements under a wide range of themes."

CONTACT DETAILS

Administration matters
Ms. Cha-on Phasuravong
Tel: +66 (0)2 524 5488
email: chaon@ait.ac.th

Website
https://ait.ac.th/program/food-engineering-and-bioprocess-technology/

School of Environment, Resources and Development
Department of Food, Agriculture and Natural Resources

FOOD INNOVATION, NUTRITION AND HEALTH (FINH)

Program Overview

The FINH program encompasses particularly unraveling the food-health nexus and addresses the issues that have not been addressed up to now. It will develop students' higher-level thinking skills to gain a deep understanding of the multi-dimensional and multi-sectoral nature of the food security, food safety, and nutrition challenges and to be able to identify the innovative solutions to these challenges, such as the necessity to maximize the utilization of resources and to global supply chain strategy and to integrate the food and nutrition security, food safety homogeneously in all the region. The program has been extensively studied and prepared with the support from the European Commission for Higher Education since 2020.

Key Courses

Food Safety Standardizations, Risk Management, and Traceability Systems, Gut Physiology, Metabolic Diseases, and Health, Sustainable Food Process Design, Molecular Nutrition, Food Toxicology, and Health, Design Thinking, and Innovations in Healthy Food Product Development, Properties of Food Biomaterials and Nutrients, Sustainable Food Production, Consumer Behavior, Diet Preferences, and Marketing, Food Supply Chain Management and Sustainability, Processing Effects on Functional Components of Foods, Sand statistical Methods for Research.

Research in Action

Research linked to this program includes Sustainable Food Product Design, Design Thinking and Innovation in Healthy Food Product Development, Molecular Nutrition, Food Toxicology, and Health, Gut Physiology, Metabolic Disease and Health, Properties of Food Biomaterial sand Nutrients, Food Safety Standardization, Risk Management and Traceability Systems, and Processing Effects on Functional Components of Foods.

An example of a specific applied research includes Climate Change Adaptation in Agriculture for Enhanced Recovery and Sustainability of Highlands in Thailand (Co-PI). This project aimed to reduce the vulnerability and enhance adaptive capacity of highland communities and ecosystems to cope with current and projected climate change impacts in Nan Province of Thailand, 2021- 2023.

Career prospects

- Product Development Scientists work on creating new food products that are nutritious, flavorful, and meet consumer demands.
- Nutritionist/Dietitians: advise individuals and communities on healthy eating habits, disease prevention, and nutrition therapy. They may work in hospitals, clinics, schools, or private practice, providing personalized nutrition plans and counseling services.
- Food Technologists focus on improving food products' taste, texture, and nutritional value while ensuring safety and quality standards. They may work in food manufacturing companies, research institutions, or government agencies, developing and testing new food processing techniques and ingredients.
- Health and Wellness Consultants provide guidance to individuals, organizations, and communities on lifestyle changes, nutrition, and disease prevention strategies.
- Food Policy Analysts study and analyze government policies, regulations, and initiatives related to food production, distribution, and consumption.
- Public Health Nutritionists design and implement nutrition programs and interventions aimed at improving population health outcomes.

QUOTE FROM STUDENT

Ms. Manisha Anand
India

"The hands-on approach to bioprocessing and food engineering has allowed me to apply theoretical knowledge in practical scenarios, preparing me for real-world challenges in the industry. The supportive faculty and collaborative environment foster creativity, encouraging us to explore innovative solutions to current food-related issues. This program not only equips us with technical skills but also instills a deep understanding of sustainability and the importance of efficient food production. It's a journey filled with exciting discoveries and a sense of purpose in contributing to the future of the food industry."

Mr. Daniel Rice
USA

"I am constantly amazed by the scope of the program and the hands-on experience in various aspects of food technology. The program equips us with a deep understanding of the latest advancements in food technology and also provides ample opportunities to apply these concepts in real-world settings. What truly sets this program apart is its diverse student body. Interacting with classmates from many countries not only broadens our perspectives but also enriches our learning experience, allowing us to approach challenges with innovative solutions informed by a global mindset"

QUOTE FROM ALUMNI

Ms. Anjali Shrestha
Class of 2022, Nepal

"In the realm of Food Innovation, Nutrition, and Health, I discovered a profound intersection of science and creativity. The program empowered me to pioneer sustainable solutions for nourishing communities worldwide. Through collaborative research and experiential learning, I honed my abilities to tackle complex food-related issues. Today, as an alum, I continue to apply the principles instilled in me to drive positive change in the food industry. This program truly shaped my journey towards becoming a catalyst for innovation in nutrition and health."

CONTACT DETAILS

Administration matters
Ms. Cha-on Phasuravong
Tel: +66 (0)2 524 5488
email: chaon@ait.ac.th

Website
https://ait.ac.th/program/food-innovation-nutrition-and-health-finh/

School of Environment, Resources and Development

Department of Food, Agriculture and Natural Resources

NATURAL RESOURCES MANAGEMENT (NRM)

The NRM Program designed to equip students with the knowledge and skills they need to manage natural resources sustainably and responsibly in the face of global challenges like climate change, biodiversity loss, and environmental degradation. Particularly, the program addresses sustainable use and management of natural resources, community-based natural resources management, forest carbon accounting, biodiversity conservation, valuation of ecosystem services, economics of NRM, NRM and climate policy, technologies and sustainability, assessment of natural resources using conventional and modern temporal and geospatial technologies. It emphasizes sustainable and responsible management of natural resources in the context of global challenges like climate change, biodiversity loss, and environmental degradation.

Key Courses

Required courses: Nature-based Solutions for Sustainable Resource Management, Forestry and REDD+, Biodiversity and Ecosystem Services, Land Degradation and Rehabilitation, Integrated Landscape Management and Restoration, Resources Assessment and Mapping, Integrated Natural Resources Planning and Policy, and Natural Resource Economics.

Elective courses: Quantitative Research Methods I & II, Natural Resources Management Field Lab I & II, Land Use and Climate Change, Sustainability Assessment Tools and Techniques, and Natural Resources Management Workshop.

Research in Action

Research areas include sustainable forest and carbon management, land use change, sustainable land management, ecosystem-based adaptation, and biodiversity conservation. The program features strong international collaboration for research, teaching, and outreach.

Several research and projects have been completed:

i. Ecotourism and Ocean Plastic Control: Vietnam & Thailand

ii. Advancing the Development and Adoption of Post-Harvest Grain Legume Technologies by Smallholder Farmers. Malawi and Tanzania

iii. Biogeochemical changes and adaptation mechanisms in response to anthropogenic impacts in watersheds: A comparative study between Jiulong River (China) and Chao Phraya River (Thailand).

Career Prospects

This program prepares postgraduates for careers in resource assessment, management, and economics for sustainable development. Our alumni have been working in government agencies, intergovernmental organizations, non-profit organizations, private sector companies, and academia. Their roles include natural resource managers, environmental policy analysts, and GIS specialists.

CONTACT DETAILS

Academic Matters
Dr. Takuji W. Tsusaka
email: takuji@ait.ac.th

Administrative Matters
Agnes T. Pardilla
email: agnes@ait.ac.th

Website
https://dds.ait.ac.th/natural-resources-management-nrm/

PROMINENT ALUMNI

Prof. Armando A. Apan
Class of 1992, Philippines
Faculty at University of Southern Queensland

QUOTE FROM STUDENT

Eaindray Aung
Myanmar

"I am greatly impressed by the balanced blend of theory and practical experience the program offers. Its teaching style is engaging and student-centered, emphasizing group discussions and individual reflections. This approach not only enhances learning but also cultivates essential 21st-century skills like critical thinking and problem-solving. The inclusion of field labs for real-world application, aligning with my interest in fieldwork, is particularly commendable."

QUOTE FROM ALUMNI

Winn Lai Lai Yi
Class of 2022, Myanmar
Project Coordinator for Asian Disaster Preparedness Center in Bangkok, Thailand

"My transformative journey was not just a path to academic enlightenment but a gateway to professional success. It provided me with a wealth of technical expertise and hands-on experience, enriched by the invaluable opportunity to learn from supportive and encouraging professors and to foster collaborative knowledge exchange with friends from diverse Asian regions. This comprehensive education paved the way for my current role at an international organization, a testament to the program's effectiveness in preparing its students for global challenges."

School of Environment, Resources and Development
Department of Energy and Climate Changes

CLIMATE CHANGE AND SUSTAINABLE DEVELOPMENT (CCSD)

Program Overview

This program is designed to produce work-ready professionals capable of assessing, finding options, and delivering them for low carbon and climate-resilient development. Addressing climate change is a key element of maintaining sustainable livelihoods and economies in Asia. Given the enormous cultural, social, political, and biophysical diversity across Asia, climate change professionals need a strong working knowledge of several interrelated sciences.

The CCSD program brings collective expertise of faculty members from different programs of AIT that embodies diverse backgrounds, experiences, expertise, fostering a dynamic learning environment on climate change in a transdisciplinary fashion. Several of our CCSD faculty members have been recognized and listed in the world's top 2% scientists in 2023.

Key Courses

Required Courses Climate Change Mitigation, Economics of Climate Change, Climate Change Challenges and Responses, Adaptation to Climate Change: Policies and Practices, Introduction to Development and Sustainability.

Elective Courses include Science of Climate Change and Impacts, Climate Compatible and Sustainable Infrastructure Development, Land Use and Climate Change, Selected Topic: Carbon Pricing, Carbon Markets and Climate Finance, Selected Topic: Sustainability – Introduction, Analysis, and Practices.

Our courses will enable graduates to work with sectoral experts in the areas of CCSD with critical thinking.

- Carry out climate change-induced impact assessment, scenario building and identification of potential impacts.
- Initiate climate change mitigation and adaptation measures
- Undertake policy analysis and development (integration, application, and mainstreaming)
- Conduct technology assessment and adopt climate-friendly technology for mitigation and adaptation.
- In addition to academic program activities, students have access to several centers and outreach activities in the campus and other regional organizations (UNESCAP, UNEP, UNDP, FAO, and others) for the internship, collaborative works, and research funds, etc.

Research in Action

Our research focuses on low carbon and climate-resilient cities, greenhouse gas accounting, technology needs, climate policy assessment, climate financing, disaster and risk management, impact, and adaptation to climate change in water, land, agriculture, and their nexus.

Some completed research can show up these relevance:

i. "Individual behavior, climate change and sustainability" in collaboration with University of Rouen (France) and Mekong Development Research Institute (Vietnam) from 2016-2018

ii. Integration of Sustainability into Bangladesh´s Textile Sector" in collaboration with Technical University of Dresden (Germany) from March-July 2019

iii. Low Carbon Development Opportunities Created by Forestry Carbon Project

Career Prospects

Our alumni are serving as leaders in the private sector, consulting companies, think tanks, governments, universities, United Nations agencies, and Development Banks in Asia and beyond: Climate/Environmental Scientist, Renewable Energy Specialist, Climate Policy Analyst, Environmental Scientist, Climate Change Educator/Communicator, Green Building Consultant, Climate Risk Analyst, Expert in Sustainability Issues, Expert in Adaptation Issues.

CONTACT DETAILS

Academic Matters
Prof. Mokbul Morshed Ahmad
email: morshed@ait.ac.th

Administrative Matters
Sheree Ann S. Gonzales
email: sheree@ait.ac.th

Website
https://ait.ac.th/program/climate-change-and-sustainable-development-ccsd/

PROMINENT ALUMNI

Dr. Jirawat Panpeng
Class of 2018, Thailand
Policy and Plan Analyst, Office of the National Economic and Social Development Board (NESDB)

His research focus on raising awareness for coastal people on climate change and its impacts, particularly the severity of coastal erosion and seawater inundation, particular in several cases such as coastal erosion and seawater inundation in Chanthaburi Province, Thailand; and Vulnerability of Fishing Communities from Sea-Level Change.

QUOTE FROM STUDENT

Soe Sandy Lin
Myanmar

"Climate Change and Sustainable Development program can offer a well-rounded education, preparing individuals to contribute meaningfully to society by addressing pressing environmental issues and promoting sustainable practices. It equips me with the knowledge, skills, and mindset needed to navigate and contribute to a rapidly changing world."

QUOTE FROM ALUMNI

Madison Cason
Class of 2023, USA
SA, Global Hope Network International

"I'm proud to be an AITian because of the quality reputation of AIT. The professors truly help you. This program has enabled me to learn more about climate change so that I can be successful in my job and work towards stewarding the environment better."

School of Environment, Resources and Development
Department of Energy and Climate Changes

SUSTAINABLE ENERGY TRANSITION (SE)

Program Overview

This is an interdisciplinary program encompassing new technologies, policy, social, and management aspects, addressing the rising challenges of energy transitions, especially in the areas of low-carbon electricity supply systems, reducing energy intensity, demand and providing energy access to all physical and geographical areas. This program aims to create next-generation leaders skilled in thinking and leading the process of sustainable energy transitions for delivering a reliable, clean, affordable energy supply compatible with sustainable development in the 21st century.

The SE program faculty members embody diverse backgrounds and experiences. In a remarkable achievement, five of our faculty members have been recognized and listed in the world's top 2% of scientists 2023.

Key Courses

Required Courses are Energy Technology, Transition and Sustainability, Energy Systems, and Economics and Policy.

Smart Grid and Variable Renewable Energy Integration, AI Applications in Power and Energy Systems, Carbon Pricing, Market and Climate Finance, Electric Vehicles and Sustainable Mobility Infrastructure and Energy Market Regulation.

Research in Action

Research areas include improving energy access; climate change mitigation; renewable energy technology diffusion and integration to energy system; smart grid and microgrid; application of IoT, Big Data, and blockchain technology in energy systems; electric and hybrid electric vehicles technology diffusion; energy efficiency and energy storage; energy policy analysis, cross-border electricity trade; and carbon market and finance. The program features strong industry and international collaboration for research, teaching, and outreach.

Some examples are:

i. Design and Development of Smart Grid Test Bed for Experimental Verification of Synchrophasor based Algorithms for Wide Area Monitoring, Protection and Control (WAMPAC) for Power Grids with Large Penetration of Renewable Energy Resources

ii. Evidence based policies for the sustainable use of energy resources in the Asia Pacific Region (PI). Sponsor: The United Nations Economic and Social Commission for Asia and the Pacific (UN-ESCAP).

Career prospects

Our alumni serve as leaders in the private sector, consulting companies, think tanks, governments, universities, United Nations agencies, and development banks in Asia and beyond.

- Energy companies/utilities (for planning, implementing, and forecasting electricity and fossil-based resources)
  e.g., EGAT, PTT, PEA, MEA, PNOC, EVN, EdC, BP, Shell, Chevron
- Academic institutions (for teaching, research, consulting on Energy and environmental issues)
  e.g., Thailand (KMUTT, SIIT), India (NIT, VIT), Vietnam (HUT), Cambodia (ITC), Philippines (UP), Indonesia (ITB), Australia (UTS, Murdoch), Canada (Saskatchewan, Waterloo, Toronto), USA (Auburn, PNNL)
- Regional and international organizations (managing energy issues, climate change mitigation)
  e.g., WB, ADB, IAEA, IEA, UN-ESCAP, UNEP, ADEME
- Ministries of Energy, industry, and environment (energy policy formulation, implementation of projects)
  e.g., MoE, DEDE, DOST, MIME, MNES, Mongolian Fuel and Energy Authority
- Private and consulting organizations (technology development, energy project development/management, renewable energy projects)
  e.g., Siemens, IIEC, B. Grimm, Schneider, AA, Castlerock
- Non-government organizations (community projects, research, development)
  e.g., TERI, CCDE/IED

CONTACT DETAILS

Academic Matters
Prof. Weerakorn Ongsakul
email: ongsakul@ait.ac.th

Administrative Matters
Sheree Ann S. Gonzales
email: sheree@ait.ac.th

Website
https://ait.ac.th/program/sustainable-energy-transition/

PROMINENT ALUMNI

Dr. Warodom Khamphanchai
Class of 2011, Thailand
CEO and Co-Founder of AltoTech Co., Ltd

Dr. Warodom Khamphanchai's current position is CEO and Co-Founder of AltoTech Co., Ltd. an AI startup based in Bangkok, Thailand, which aims to help over 34,000 hotels in Thailand (and later SEA) save money on electricity bills with IoT and Reinforcement Learning algorithms. He is the ambassador of Bangkok AI (bangkok.city.ai), where he helps run education and training initiatives with other city.ai ambassadors around the globe.

Dr. Jutamanee Martchamadol
Class of 2007 and 2012, Thailand
Energy and Innovative Cleantech Specialist, National Project Coordinator at the Renewable and Rural Energy Unit (RRE), United Nations Industrial Development Organization (UNIDO), Thailand

Dr. Jutamanee Martchamadol is an Energy and Innovative Cleantech Specialist and working as the National Project Coordinator at the Renewable and Rural Energy Unit (RRE), United Nations Industrial Development Organization (UNIDO), Thailand, to accelerate the innovative clean technologies & businesses in Thailand and develop new projects for countries in Asia. She is also a visiting lecturer at Burapha University, Thailand, to promote energy planning and audit to bachelor students.

QUOTE FROM STUDENT

Kristina Badec
Philippines

"With the current global climate change and energy crisis, the SE program emanates the necessary knowledge and skills to the energy practitioners. Upon acquisition, exposure, and guidance of well-recognized professors, we can work on research and projects that help resolve energy transition-related issues."

School of Environment, Resources and Development
Department of Development and Sustainability

DEVELOPMENT PLANNING MANAGEMENT AND INNOVATION (DPMI)

Program Overview

The DPMI program focuses on the role of innovation and planning in sustainable development and how the areas of planning and innovation interplay, evolve, and shape the economy and the environment in different regions and periods.

The program prepares graduates with knowledge, competencies, and skills in planning and managing the challenges of sustainable development such as poverty, food insecurity, and social environmental change, with an emphasis on cross-cutting issues like power, politics, justice, and ethics. Practice-oriented development planning is carried out regularly at district and sub-district levels following a participatory and integrated approach.

Key Courses

Development Policy and Practice, Innovation and Sustainable Development, Development Planning Workshop, Agricultural Development and Social Innovation, Development Project Planning and Management, Community Development Planning and Management, NGO Management, Policy and Development Administration, Managing Disparities, ICT for Development, Socio-ecological Systems Approaches and Adaptive Governance

Other related courses are Quantitative Research Method I and II, and Qualitative Research Method, Public Policy, and Social Impact Assessment.

Research in Action

The DPMI team at AIT is involved in research grants and consultancy projects across diverse areas, including rural socio-ecological systems, community capital, sustainable agriculture and rural livelihoods, natural resource governance, local institutions, environmental public health, education, and innovation for sustainable development across the Asia Pacific and beyond. Some highlighted research projects include:

- Asia Pacific Rural – Urban Sustainability Program for Regional Impacts. This program is a collaboration with universities in China, Hong Kong, Taiwan, along with local partners. It includes the Urban-Rural Sustainability Fellowship, focusing on rural sustainability in peri-urban areas. Landscape research also assesses rural sustainability efforts across participating countries to develop a comprehensive Asia-Pacific model of rural sustainability to inform policy innovations and action partnerships.
- Assessment of environmental inequalities of air pollution of vulnerable socioeconomic groups aims to address socio-environmental injustice of air quality in formal and informal economy in Southeast Asia. It focuses on developing the environmental justice index of air quality developed by combining air pollution protection index and socio-economic index. This helps policy makers to develop adequate strategies for mitigating air pollution burdens, sustainable city planning and improving social protection policy.
- Application of Big Earth Data for SDG 2 assessment and identifying governance system structures for achieving the SDGs at the national level. It uses a matrix tool of the governance system analysis framework to evaluate governance systems for the SDGs. The ultimate goal is to provide evidence-based suggestions for better and more coherent policies that can help deliver the SDGs.
- Farming systems and role of institutions in the transition towards sustainable agricultural sector. This project, conducted through a case study in Prachinburi Province, Thailand, focuses on understanding how farmers' knowledge and skills, their leadership capacity, and their motivations—built within their organizations, associations, and the community's social capital—contribute to changes in farmers' behavior towards sustainable agricultural practices.
- Development of an innovative socio-ecological governance model for groundwater management in the context of rapid urbanization and climate change. With experiments in the Lower Mekong and Mediterranean regions, this research promotes science-based approaches and institutional pluralism. It enhances stakeholders' understanding of groundwater governance status, fostering collaboration with academics to strengthen scientific evidence and address disparities in groundwater use and management.
- DPMI is also part of the EU Erasmus+ Mobility for Faculties and Students with the University of Sassari (Italy).

Career Prospects

Our alumni have been working in government agencies, intergovernmental organizations, non-profit organizations, private sector companies, and academia. Their roles include policymakers, planners, national and local administrators, UN and NGO managers, community developers, and researchers and educators.

CONTACT DETAILS

Academic Matters
Dr. Thi Phuoc Lai Nguyen
email: phuoclai@ait.ac.th

Administrative Matters
Agnes T. Pardilla
email: agnes@ait.ac.th

Website
https://dds.ait.ac.th/development-planning-management-and-innovation-dpmi/

PROMINENT ALUMNI

Ms. Chongchith Chantharanonh
Class of 2001, Lao PDR
Secretary General, the National Commission for Mothers and Children Secretariat, Lao PDR

She's successful led development of the Regional Review on Laws, Policies and Practices within ASEAN relating to the Identification, Management and Treatment of Victims of Trafficking, especially Women and Children are a project of the ASEAN Commission on the Promotion and Protection of the Rights of Women and Children (ACWC) under the ACWC Work Plan 2012-2016.

QUOTE FROM STUDENT

Mr. Surendra Tiwari
Nepal

"My decision to pursue my Ph.D. in the Development, Planning, Management, and Innovation (DPMI) program was the best decision I have ever made. The program cultivated advanced research skills crucial for addressing complex challenges in global development. Further, this also equips me to navigate and propose innovative ideas in the ever-evolving landscape of global development."

QUOTE FROM ALUMNI

Ms. Siwarat Pattanasri
Class of 2021, Thailand
Strategic Planning Analyst of the Central Business District and Smart City Division

"As a DPMI alumnus, I draw on the profound insights imparted by the esteemed faculty at Development Planning Management and Innovation, AIT. Now serving as a government policy analyst at the Eastern Economic Corridors Office (EECO), I apply their teachings to shape impactful policies, contributing to sustainable regional development with a deep understanding of diverse perspectives in the field."

School of Environment, Resources and Development

Department of Development and Sustainability

DEVELOPMENT AND SUSTAINABILITY (DS)

Program Overview

This program is based on an interdisciplinary approach to sustainable development. It builds upon shared expertise and offers an academic curriculum that draws upon strong socio-economic and environmental expertise from faculty members with regional and/or global experiences. This program will be especially attractive to applicants looking to become professionals and managers with broad knowledge of development and sustainability issues, rather than specializing in particular academic and research areas. The program is also aligned with the capacity building needs in the United Nations Sustainable Development Goals (SDGs) regarding both environmental and social dimensions of development.

Our faculty members bring a wealth of diverse experience and expertise, enhancing the interdisciplinary nature of our curriculum. Aside from coming from different parts of the world which allows a rich diversity of perspectives to ensure a comprehensive understanding of sustainable development issues, our faculty members are committed to excellence and dedicated educators who aim to nurture the next generation of leaders.

Key Courses

Public Policy, Development Economics, Social Impact Assessment, Introduction to Development and Sustainability, Introduction to Research Design and Methods, Quantitative Analysis Using R, Introduction to Research Design, Quantitative Research Methods, Qualitative Research Methods. Our courses will enable graduates to work with sectoral experts in the areas of CCSD with critical thinking.

Research in Action

Our researchers take an interdisciplinary approach to studying development and sustainability in the region, including both the environmental dimensions of sustainability, made more urgent by climate change, and the social, political, and economic dimensions of sustainability, which must be understood to address climate change and environmental challenges and to foster democratic development and greater equity between different groups and generations.

Several examples of current research projects:

i. Coastal areas governance in the context of rapid tourism urbanization and climate change in Southeast Asia

ii. Asia Pacific Regional Collaboration on Ecolabelling, under Project: Mainstreaming Resource Efficiency Aspects into Sustainable Development Planning, Policies and Regulatory Frameworks,

iii. Assessment of Environmental Inequalities of Air Pollution of Vulnerable Socioeconomic Groups in the World of Work in Bangkok City, Thailand.

Career prospects

DS graduates emerge from the programs prepared for professional work with the ability to apply DDS-related knowledge and skills in both technical and administrative applications. Graduates from DDS work in several areas include Government organizations such as planning and local agencies, Universities and research institutes, Inter-governmental/multi-lateral and bi-lateral organizations such as UN agencies, WB, ADB, USAID, CIDA, etc. International and regional non-governmental organizations such as WWF, ADPC, Private sector such as business and consultancies.

CONTACT DETAILS

Academic Matters
Prof. Mokbul Morshed Ahmad
email: morshed@ait.ac.th

Administrative Matters
Agnes T. Pardilla
email: agnes@ait.ac.th
Usanee Nimdang
email: usaneen@ait.ac.th

Website
https://dds.ait.ac.th/development-and-sustainability-program-dsp/

PROMINENT ALUMNI

Mr. Theethus Rangkasiri
Class of 2022, Thailand
Founder and CEO, Defire Tech Co., Ltd, Thailand

A sustainability leader and social entrepreneur who is on a mission to achieve the Three Zeros: Zero Poverty, Zero Unemployment, and Zero Net Carbon Emissions.

QUOTE FROM STUDENT

Aashna Sharma
India

" As a master student in the DS Program, I find myself immersed in the transformative learning experience that surpasses the ordinary. The interdisciplinary approach, a hallmark of this program, broadens my perspective incorporating diverse ideas and knowledge spanning across various areas. The program's exclusive focus on sustainable development, gender, and development, social and environmental sustainability, including other core focus areas, has not only broadened my intellectual horizons but also equipped me with a holistic understanding of critical issues. This broader and specialized curriculum of DSP is equipping me to address multifaceted development issues, making me well prepared for a future as a development manager in a rapidly changing world."

QUOTE FROM ALUMNI

Panupong Sriudom
Class of 2023, Thailand

"My time on the DS program was more than a simple quest for knowledge: it was a transformative academic journey filled with vital real-world knowledge, meaningful connections, and rich memories. AIT provided me with a robust foundation in sustainable development, cultivating not only my expertise but also fostering an international network that transcends borders. AIT's comprehensive approach to sustainable development exposed me to a myriad of perspectives, exploring the subject in diverse contexts and aspects. This holistic understanding has become a cornerstone of my professional endeavors, enabling me to address challenges with a well-rounded perspective."

School of Environment, Resources and Development
Department of Development and Sustainability

GENDER AND DEVELOPMENT STUDIES (GDS)

Program Overview

This program develops scholars, analysts and practitioners who can integrate gender approaches into development planning and management and conduct original gender and development-related research for advancing development goals, including the Sustainable Development Goals, globally and in Asia. As an academic arm of community-based efforts for gender equality and for the advancement of rights and inclusion of women and individuals of all sexual orientation and gender identity expression, GDS aims to be a center of excellence in gender and development studies by integrating gender equality as a key intellectual perspective and ethical concern in sustainable development.

The GDS faculty at AIT is a dynamic group with expertise covering sociology, communication, economics, anthropology, environmental studies, and public policy. They are actively engaged in high-impact research, addressing contemporary challenges in gender and development, such as gender-based violence, migration, rights and inclusion, and economic empowerment. Faculty members are not only active academics but also positively engaged with practice, working closely with development programs and projects, bringing back real-world experiences to the class.

The faculty's commitment to interdisciplinary collaboration enhances the program's holistic approach, providing students with a well-rounded understanding of gender and development. The GDS faculty's diverse backgrounds, expertise, and impactful research contribute significantly to the program's academic excellence and global influence.

Key Courses

Required courses are Gender and Development: Principles and Concepts; Science, Technology and Gender; Gender, Culture and Human Development and Gender and Human Rights

Elective Courses include Gender, Enterprise & Organization; Gender and Development Communication; Diversity, Equity and Social Justice in Digital Cultures; Gender Analysis and Gender-Responsive Development Planning; Gender, Power and Politics; Gender and Labor Migration in Asia; Gender Issues in Global Economy; and Gender and Forced Migration

Research in Action

GDS has a vibrant transdisciplinary research program spanning regional, national and grassroots levels. The commitment to produce inclusive, evidenced-based, and agenda-setting research was a pioneering feature of the program and continues to shape our active and responsive contribution to critical development policies, practice and theorizing on gender and development in the region and the field as a whole. The studies cover migration and human trafficking, agriculture and fisheries, labor and entrepreneurship, care work, social determinants of health, sexuality, information and communication technology, media representation, disaster resilience, environmental sustainability and climate change, livelihoods, natural resource management, political participation, access and control dynamics, technology and development, and indigenous perspectives.

Among the notable ongoing research/outreach endeavors are capacity building and networking among women activists in Myanmar, and development of gender monitoring indicators for nature-based climate solutions in aquaculture. In the past, we have worked on women's political participation in Myanmar, and gender analysis of labor migration in the Greater Mekong Subregion.

GDS has also established the Centre on Gender and Forced Displacement, led by a chair professor supported by IDRC.

In addition, GDS manages the international refereed journal Gender, Technology and Development published by Taylor and Francis (impact factor 2.7 for 5-year impact factor in 2022).

Career Prospects

Graduates of GDS are well-prepared for versatile professional roles, adept at applying gender analysis across technical and development sectors. Their impactful contributions extend across various domains, significantly influencing South Asian, Southeast Asian, and broader Asian development landscapes.

GDS alumni actively engage in government organizations, including universities and research institutes, as well as inter-governmental bodies such as UN agencies, ADB, FAO, ILO, WHO, and international/regional non-governmental organizations. Their roles also encompass influential positions as activists, politicians, and senior policy makers, shaping gender-inclusive policies. Some have become social entrepreneurs. The profound impact of GDS extends globally, making a substantial difference in fostering gender and development initiatives worldwide. Many graduates further their academic journey by pursuing Ph.D. degrees, solidifying their commitment to advancing gender equality and sustainable development on a global scale.

PROMINENT ALUMNI

Mrs. Binda Pandey
Class of 2002, Nepal
Freelance GEDSI consultant (politically standing committee member of CPN-UML, heading department of economic and planning department of party)

QUOTE FROM ALUMNI

Ms. Vu Phuong Ly
Class of 2005, Vietnam
Gender Training Specialist Centre of Excellence for Gender Equality (based in Seoul, the Republic of Korea) UN Women Regional Office for Asia and the Pacific

"AIT has profoundly transformed my life in ways I could never have imagined. Graduating in Gender and Development Studies in 2005, the turning point came in 2006 when the government of Viet Nam adopted the Gender Equality Law. Leveraging my expertise from working with international organizations and the United Nations, I seized invaluable opportunities to contribute significantly to formulating and executing crucial policies in Viet Nam. AIT equipped me with the knowledge and customized tools to effectively address gender equality issues within the unique context of Asia. Reflecting on 18 years dedicated to advancing gender equality in Viet Nam, I now find myself expanding my impact to serve the broader Asia-Pacific region. AIT not only provided me with academic prowess but also became a source of inspiration for my career development, continuing to fuel my passion for the critical work of advancing gender equality and the empowerment of women."

CONTACT DETAILS

Academic Matters
Prof. Kyoko Kusakabe
email: kyokok@ait.ac.th

Administrative Matters
Agnes T. Pardilla
email: agnes@ait.ac.th

Website
https://dds.ait.ac.th/gender-and-development-studies-gds/

School of Environment, Resources and Development
Department of Development and Sustainability

URBAN INNOVATION AND SUSTAINABILITY (UIS)

Program Overview

This program aims to enhance professionals' ability to address the complexities of modern urban environments. It focuses on fostering sustainability by developing technologies and knowledge systems that support thriving economies, healthy ecosystems, and human well-being. It also addresses emerging themes such as aging populations, the circular economy, smart buildings, responsible travel, and inclusive, healthy cities.

The program's objectives include promoting public actions for innovation and sustainability, conducting research, teaching, and generating tools for local governments, decision-makers, planners, and communities.

Why UIS

UIS program is very much in line with global and regional trends of urbanization and sustainability which have come with both challenges and opportunities

11% Job Growth: the U.S. Bureau of Labor Statistics projects an 11% rise in employment opportunities for urban planners over the next decade.

High GDP - World Bank reports >80% of global GDP is generated in cities from 56% of total population.

City solutions: The World Bank reports a global investment estimated to be $4.5-5.4 trillion per year to adapt to and mitigate climate change in cities.

Asia's Boom: Join the demand for urban planning professionals in Asia, as witnessed by our successful graduates in top organizations.

Key Courses

We focus exceptionally on foundation courses in areas of urban design and planning; urban systems, innovation and sustainability, urban innovation and sustainability practice workshop, and urban resilience assessment. Innovative, private sector, and market-demanded courses (i.e., circular economy, urban logistics, digital and ICT innovation, etc.), address new frontiers and the integration of skills to develop practical skills and an informed approach to sustainable and smart urban development.

Research in Action

- International Climate Initiative project for SEA: ICI-SEA project aim is to strengthen local capacity for adaptation to climate change in SEA coastal cities in Southeast Asia (SEA), supported by the International Climate Initiative (ICI).
- ReTrEAT Cities: 'ReTrEAT Cities' aims to develop and implement novel 'participatory energy-neutral coastal retreat planning' focusing on Resettlement, Transformation, and Eco-Adaptation Typology for cities and vulnerable coastal communities

- Breathe Cities: 'Breathe Cities' project for Bolstering Resilience and Environmental air quality through Transformative Healthy Emission Transport in Cities for mitigating air pollution, minimizing community impacts, and priorities localized adaptation options
- RFCC Coastal Governance: RFCC project aims to establish a Regional Forum for Climate Change is focuses in tourism urbanization in coastal areas in Southeast Asia through the prism of large-scale resorts and infrastructure implementation

Career Prospects

In an increasingly urbanized world, there is growing international demand for urban innovation and sustainability (UIS) graduates. Our program provides a solid foundation for a successful and fulfilling career, empowering you to make a lasting impact in the dynamic field of Urban Innovation and sustainable solutions. UIS graduates are working in Government Agencies, Intergovernmental Organizations, non-profit organizations, research, private sector companies, and academia.

In an increasingly urbanized world, there is growing international demand for urban innovation and sustainability (UIS) graduates. We are nurturing future urban leaders by providing a solid foundation of knowledge, preparing them for the practical application of technology and sustainability approaches for the urban solutions. Ultimately, our aim is to equip students for a successful and impactful future working in Government Agencies, Intergovernmental Organizations, non-profit organizations, research, private sector companies, and academia.

Career paths can be seen as:

- Urban planner and designer: nurturing future urban planner designers with solid foundation knowledge of design and planning principles, process, frameworks and mechanisms.
- Digital and ICT Innovation specialist: Train current and emerging digital and ICT technological innovation for built environmental solutions.
- Urban logistics planner: Urban logistics planning and management, logistics solutions, green logistics, electric vehicles.
- Urban practitioner: Practice urban solution, integrated design, Community-based Design, Results-based Planning, Sustainability Design.
- Urban Resilience analyst: climate-resilient urban planning, strong city planning, multi-scale and multi-sectoral resilience approaches and methods.
- Urban Systems, innovation and Sustainability specialist: broad-based understanding of various cutting- edge knowledge in urban sustainability, innovations and connected technology.
- Eco-Innovation and Circular Economy planner: proven evidence and emerging opportunities of eco-innovation and circular economy.
- Urban spatial analyst: spatial statistical modeling, metropolitan spatial databases, database structure and design issues, data acquisition-processing-enhancement.

CONTACT DETAILS

Program Chair
Dr. Malay Pramanik
email: malay@ait.ac.th, apc-uis@ait.ac.th

Program Member
Prof. Vilas Nitivattananon
email: vilasn@ait.ac.th

Administrative Matters
Usanee Nimdang
email: usaneen@ait.ac.th

Website
https://ait.ac.th/program/urban-innovation-and-sustainability/

PROMINENT ALUMNI

Mrs. Sukumaporn Jongpukdee
Class of 2001, Thailand
Assistant Governor, National Housing Authority, Thailand

"The Urban Innovation and Sustainability (UIS) program at the Asian Institute of Technology has profoundly influenced my professional journey. From my early days as an architect to my current position as Assistant Governor, the knowledge and skills gained from UIS have guided my work in policy planning, housing project development, and capacity building for local governments."

QUOTE FROM STUDENT

Ms. Cindy Shrestha
Nepal

"The Urban Innovation and Sustainability program provided me with the perfect platform to witness the challenges and triumphs of urban development firsthand in Thailand's dynamic cities. It challenged me to think critically about the complexities of urban development while simultaneously fostering my ability to develop innovative solutions for a sustainable future. My journey in UIS has fueled my desire to be part of the solution, and I feel excited to use what I have learned to make a positive difference in the world."

QUOTE FROM ALUMNI

Mr. Kyaw Zabu Tun
Class of 2014, Myanmar

"The UIS program at the Asian Institute of Technology has profoundly enriched my learning experience. Engaging with colleagues from diverse backgrounds, including architecture and social sciences, has broadened my perspectives. The comprehensive curriculum covers sustainable and urban development, providing a solid foundation for creating sustainable urban environments."

SCHOOL OF MANAGEMENT (SOM)

The School of Management (SOM) has highly ranked programs (by QS) such as the MBA and Business Analytics & Digital Transformation (BADT). We welcome master's students to a range of programs and also have doctoral students (DBA and Ph.D.) who research staple management subjects such as finance, HR, leadership, entrepreneurship, digital transformation, marketing, economics etc. SOM has centers at the main campus (for those taking daytime courses) and in downtown Bangkok (for evening and weekend courses). Many of our students utilize the flex-mode available for their classes; attending live classes either in person or on Zoom. A hallmark of the SOM programs is the mix of classes taught by high-level executives and research faculty. The curriculum of all our programs is also reviewed and revised on an annual basis with topical courses regularly added.

Our diverse faculty engage in extensive research across critical business domains and includes research into CSR/ESG, Sports Management, Africa Business, Scenario Planning, Strategy, Managing Technological Innovation, Green Technology Assessment, Digital Transformation, Human Resource Practices, Leadership, Cross-cultural Management, Entrepreneurship, Corporate Finance, Corporate Governance, Services Marketing, Branding, Customer Experiences, and Services Innovation.

An example of an existing research project is focused on the Digital Divide within ASEAN under the 4th Industrial Revolution Focusing on Mekong Countries. This study has three objectives. The first examines the structural, behavioral and performance characteristics of the digital divide in 5 Mekong riverside countries of ASEAN (Thailand, Vietnam, Cambodia, Laos, and Myanmar) in the era of the 4th Industrial Revolution at the macro level. The second identifies the business behavior and performance characteristics of information gaps in industries of the Mekong countries at the meso level. And the last objective is to characterize the structure and utilization behavior of manufacturing and service technologies for mitigating the digital divide of the Mekong countries at the micro level. Through these three research objectives, the ultimate goal is to establish a mechanism to alleviate the digital divide of the Mekong countries and to create opportunities for the information and communication industry of Korean companies. This work is supported by the Ministry of Education of the Republic of Korea and the National Research Foundation of Korea.

Website: https://ait.ac.th/school/school-of-management/

School of Management

BUSINESS ADMINISTRATION (MBA)

Program Overview

We offer a premier MBA program that is designed to develop global business leaders with a strong understanding of Asian economies and business practices. With a legacy of excellence and a commitment to innovation, AIT prepares students for leadership roles in a rapidly changing world.

Key Courses

Core courses are Leadership & Organization Management, Accounting for Decision-Making, Strategic Management, Corporate Finance, Change Management, Managerial Economics, Managing Technology & Innovation, Operations Management, Marketing Management, and Responsible and Sustainable Management Decision-Making.

Elective courses are added each year. Current examples of electives to choose from include consulting skills, agile thinking, storytelling using data, negotiations/crisis management, big data analytics, digital marketing, capital markets, ESG reporting, entrepreneurship and valuation/investments.

Career Prospects

The MBA prepares students for a range of different careers. These include:

Management Roles such as in Project Management with graduates equipped with strategic planning skills, our MBAs demonstrate excellence in project management, guaranteeing the successful execution of initiatives.

Specialized Roles:

- Finance Manager: Graduates specializing in finance can pursue roles like financial analysts or finance managers, actively contributing to crucial fiscal decision-making.
- Marketing Manager: Those with a focus on marketing lead teams, develop campaigns, and analyze market trends.
- Human Resources Director: AIT MBAs frequently secure HR leadership positions, leveraging their expertise in organizational behavior and management.
- Consultancy: Our graduates are highly sought after by consulting firms, providing valuable strategic advice to businesses.

Entrepreneurship:

- Startup Founder: AIT School of Management nurtures entrepreneurship, empowering graduates to apply their business acumen to initiate and manage ventures.

Global Opportunities:

- International Business Manager: A global perspective cultivated on the MBA opens doors for graduates to manage international operations and expand businesses globally.

Public Sector and Nonprofit:

- Government Roles: AIT MBA graduates make substantial contributions to public administration, policy-making, and program management within governmental organizations.
- Nonprofit Leadership: Many nonprofits highly value the business expertise of AIT MBAs in leadership and strategy roles.

CONTACT DETAILS

Administration matters
Ms. Sitahng Puttha
Tel: (66) 2 524 -6371
email: sitahng@ait.ac.th

Further program information
https://som.ait.ac.th/mba
Admissions
somadmissions@ait.ac.th

PROMINENT ALUMNI

Mr. Herbert Vongpusanachai
Class of 1991
Managing Director, Thailand & Head of Indochina, DHL Express
Ms. Areewan Haorangsi
Class of 1994
Secretary General, Asia-Pacific Telecommunity (APT)
Mrs. Parisa Phakdurong
Class of 1999
Executive Vice President, Export-Import Bank of Thailand (EXIM Thailand)
Mrs. Shobhana Gurung Pradhan
Class of 2000
Country Director, BBC Media Action in Nepal
Mr. Viet_Huy Nguyen
Class of 2006
MOB / Managing Director, Indochina International Consulting (IICo)

QUOTE FROM STUDENT

Sopita Maneerat
Thailand

"My journey in the MBA program at AIT has been nothing short of transformative. This program has elevated and fostered my leadership skills, creativity, and practical application in real-life scenarios, significantly shaping my development. I've been challenged to think critically, approach problems with creative solutions, and lead confidently. It has also broadened my perspective on business innovation, ensuring to keep up with the constantly changing business landscape. The MBA program and SOM have provided me with more than just classroom knowledge. The diverse, dynamic, warm, and open environment for expressing opinions and mutual respect has created a memorable experience and enriched my learning. Collaborating with peers from various cultural and professional backgrounds, along with expert instructors, has expanded my perspective and deepened my understanding of global business dynamics. Additionally, it has offered me the opportunity to establish valuable networks for the future."

QUOTE FROM ALUMNI

Tran Thanh Phuoc
Class of 2024, Vietnam
Project Manager, Ah, Nam Long Investment Corporation

"The MBA program has been a game-changer for me. As a Project Manager, I sought to enhance my knowledge about strategy, operation and organization management. The program's emphasis on leadership, creativity, and practical application has directly translated to my work on major projects in my corporation. The valuable coursework, combined with the diverse perspectives of my international classmates, has broadened my understanding of global business practices. I believe that the skills and knowledge I've gained will take my career to new heights"

School of Management

BUSINESS ANALYTICS AND DIGITAL TRANSFORMATION (BADT)

Program Overview

The 'BADT' program equips students with the cutting-edge skills to leverage business analytics for driving organisational change and facilitating successful digital transformations. The program emphasizes preparing graduates for leadership roles across various industries, focusing on the practical application and interpretation of business analytics rather than exclusive expertise in statistics, analytics, programming or coding (please see the Data Science & AI degree in the School of Engineering & Technology for that type of program).

As with SOM faculty in general, our BADT faculty are a combination of respected research academics and senior executives whose expertise is in the application of AI, analytics, change management, digital transformation and global data management and from Hong Kong, Singapore, Italy, Canada, South Africa, Dubai, India, Thailand, UK. Specific examples include include practitioners such as Kevin Pereira (Managing Director, Blu - Artificial Intelligence), Stacey Huang (Organisational Psychologist and Change Practitioner at Change Voyage), and Ville Kulmala (Asian Mobile and Enterprise Technology Leader, Head of APAC for Papyrus Software).

Key Courses

Core courses are the Business of Frontier Technologies, Developing Leadership Skills for the Digital Workplace, Big Data Analytics, Responsible and Sustainable Management Decision-Making, Industry 4.0, Change Management, Global Data Management, Managerial Economics, Agile Thinking for Digital Transformation, and Digital Marketing and Consumer Analytics

Elective courses can be taken from a cluster of specializations such as marketing, management, finance or entrepreneurship with popular choices by BADT students being Storytelling Using Data, Fintech, Consultancy Skills, Negotiations & Pressurized decision-making, Strategy and Project Management.

Research in Action

The BADT program at AIT is known for research with a focus on practical application and knowledge transfer. Developing solutions for real-world problems in business and social contexts is at the heart of the curriculum. Many students choose to tackle hands-on challenges in their respective projects. Understanding the data is often a first step in finding innovative and sustainable solutions. The BADT program promotes this approach and applied research within the institute, as well as industry collaborations and startup ideas.

Two final year projects from AIT-School of Management, accepted at the 17th Annual EuroMed Academy of Business (EMAB) Conference in Pisa, Italy, serve as excellent examples of such applied research. These studies include "Dynamic Pricing in the Digitalized Liner Shipping Industry" by Ms. Prakriti Karki and "Using Web Scraping for Business Market Research in the Travel Industry" by Ms. Sameera Ahmadzai. The EuroMed Academy of Business annual conference is one of the largest business management conferences of its kind in terms of size, subject quality, and attendance reputation.

Furthermore, Dr. Tobias Endress, the program director of the Business Analytics & Digital Transformation (BADT) program, is editor of the book series "Digital Project Practice" (Taylor & Francis/USA). Professionals in the fields of business, technology, and digital transformation can benefit from this comprehensive book series. The first book, "Digital Project Practice Managing Innovation and Change," introduces the latest technologies and practices in the field and covers the principles of innovation and change management. The second book, "Digital Project Practice for New Work and Industry 4.0," expands on these principles and provides in-depth strategies and techniques for effectively managing a business in today's rapidly evolving digital landscape. The third book, "Digital Project Practice for Banking and FinTech," focuses on technological changes in the financial industry and their implications for business practice. With a combination of practical experience in the field as well as academic research, the books explore a wide range of topics in the multifaceted landscape of digital transformation. These books offer valuable insights and practical guidance for anyone looking to stay ahead in the digital age.

CONTACT DETAILS

Academic Matters
Program Director
Dr. Tobias Endress
email: tobiasendress@ait.ac.th

Program coordinator
Ms. Inah Bancoro
email: inah@ait.ac.th

Admission Inquiry
email: somadmissions@ait.ac.th

Website
https://som.ait.ac.th/badt

PROMINENT ALUMNI

Mr. Singhanart Nakpongphun
Class of 2022, Thailand
Section Lead of Corporate Communication of Thai Beverage PLC

He is also a consultant for companies who want to apply visual art and exhibition in their campaigns which are mostly engaging with marketing, SDGS or CSR.

QUOTE FROM STUDENT

Ms. Laura Scherf
Austria

"The experience in the BADT program provided a comprehensive understanding of both current and emerging technologies, as well as their application within a business context. This knowledge has been instrumental in advancing my career as a consultant. Collaborating with a culturally diverse group of students and learning from a distinguished lineup of industry experts was an invaluable experience that enhanced my capability to work on international projects in Europe and broadened my professional network. At AIT, I developed a more innovative mindset and established a solid foundation for driving digital transformation in future roles.."

QUOTE FROM ALUMNI

Hongjin Lu
China
Business Development Manager, Trip.Com Group

"The BADT program helped me gain extensive knowledge in business analytics, which I can apply the new skills to enhance work quality. Meanwhile, the AIT School of Management has provided a wide range of opportunities for students to interact with business leaders by seminars and workshops. Instead of just providing master courses, the program opens the door for me to explore different career paths."

School of Management

INTERNATIONAL FINANCE (IF)

Program Overview

This is a program that opened in 2020 and is either for those experienced professionals who have studied finance before and want a better grasp of applied finance or for those who want to enter the finance profession having previously worked in a non-finance background. It provides graduates with not just the underlying theoretical knowledge, but practical approaches to investing and risk management. The program is largely taught by senior finance executives with an industry-friendly design for those who want to use the degree to transfer to a job in finance or for those who took finance at the undergraduate level and want a deeper understanding of the practical aspects of the finance industry.

A large proportion of our finance faculty are senior executives from Hong Kong, Singapore, Dubai, India, Thailand, UK and elsewhere who teach on the daytime, evening and weekend courses.

Key Courses

Core courses include Financial Accounting and Decision Making, Applied Valuation and Investment, Responsible and Sustainable Management Decision Making, Corporate Finance, Change Management, Managerial Economics, Capital Markets, International Finance in ASEAN Wealth Management to Infrastructure Finance, Managing Risk and Developing Leadership Skills for the Finance Workplace.

Elective courses can be taken from a cluster of specializations such as marketing, management, digital transformation or entrepreneurship. Popular electives are Business of Frontier Technology. Agile Thinking, Fintech. Storytelling Using Data, Negotiations and pressurized decision making and Consultancy Skills.

Career prospects

The MSc International Finance Program offers a thorough understanding of global financial markets, investment strategies, and economic policies, preparing you to navigate and thrive in the complexities of finance. With skills and preparation, you'll be equipped to address the challenges and capitalize on the opportunities waiting for finance professionals in the fast-changing global economy.

- Financial analyst: Collect and analyze financial data, study market trends/developments in order to provide clients and organizations with strategic models to achieve its financial goals.
- Financial advisor: Advice clients on issues such as investments, taxes, insurance, mortgage and estate planning.
- Finance Manager – monitor organization's finances and performances and develop strategies to ensure its stability and maximize profits.
- Risk Management – identification of potential risks and developing mitigation strategies that could impact organization's operations, assets or financial performance.
- Asset Management - managing various financial assets, including investments and properties, to maximize value and execute strategies for clients.
- Portfolio Management - recommends investment decisions for individual or institutional investors
- Strategic Consulting - assists in making strategic decisions by providing a comprehensive understanding of corporate performances, value creation, macroeconomic forces, and global and local trends.
- Trading – facilitate the sale and purchase of bonds, stocks and other types of investment

PROMINENT ALUMNI

Sanphot Thiewprasertkul
Class of 2023, Thailand
Senior Product Manager, Advance Info Service (AIS), Thailand
Jaruboot Angsanakool
Class of 2022, Thailand
Primary Care Physician, Bangkok Metropolitan Administration, Thailand
Juan Carlos C. Borromeo
Class of 2022, Philippines
Foreign Service Officer, Department of Foreign Affairs, Philippines

QUOTE FROM STUDENT

Pichsinie Pangpomma
Thailand

"As a professional legal advisor with a non-financial background, the course design and class environment helped ease any concerns for a beginner in the financial area of study. The various intellects I gained from the expert lecturers indeed added value to my professional skills. Moreover, the classes with international classmates and practitioners from different fields enlightened me with interesting viewpoints and life lessons."

QUOTE FROM ALUMNI

Ms Pinyapa Somphong
Class of 2023, Thailand
Managing Partner at TWLS Company Limited (TWL Law Group)

"The program's comprehensive curriculum, guided by dedicated faculty, not only equipped me with a profound understanding of global financial dynamics but also provided a practical foundation through real-world case studies. In a collaborative learning environment, these theoretical and practical aspects seamlessly intertwined, furnishing me with the skills needed to navigate the complexities of international finance. Beyond academic enrichment, the program's international perspective and hands-on approach not only expanded my understanding but also facilitated the cultivation of invaluable professional connections."

CONTACT DETAILS

Academic Matters
Program Director, MSc International Finance
Dr. Syed Dhurid Khan
email: syedkhan@ait.ac.th

Program coordinator
Marianna Montecillo
email: mariannemontecillo@ait.ac.th

Admission Inquiry
Tel: +66 (0) 614018507
email: somadmissions@ait.ac.th

Website
https://som.ait.ac.th/international-finance

School of Management

DIGITAL MARKETING (DM)

Program Overview

Courses in this topic are being introduced as electives to the MBA program in 2024-25 with a full launch of the program expected in 2025-26.

The program was developed in recognition that in today's rapidly evolving digital landscape, where technology shapes every aspect of business and communication, the need for expertise in digital marketing has grown exponentially. This is partly due to the surge in online commerce, social media, data analytics, and technology integration into marketing strategies. There is, therefore, an acute demand for professionals who possess a comprehensive understanding of digital marketing techniques. This program has been conceived to equip students with the specialized knowledge and skills required to navigate this dynamic field successfully.

The MSc Digital Marketing program is tailored to align with current industry trends, focusing on advanced digital marketing concepts, tools, and strategies that organizations need to effectively engage with their target audiences in the digital realm. There exists a gap between traditional marketing education and the evolving demands of digital marketing. The program aims to bridge this gap by offering specialized courses encompassing search engine optimization (SEO), social media marketing (SEM), data analytics, content strategy, and more.

Distinguished faculty members specializing in digital trends, emerging technologies, and data analytics will facilitate targeted courses related to these cutting-edge areas. Their guidance will empower students to remain abreast of the rapidly evolving digital marketing landscape, equipping them with the expertise to navigate and leverage emerging technologies effectively.

Key Courses

Core courses The Business of Frontier Technologies, Digital Marketing Matrix, Digital Marketing Analytics, Master SEO & SEM, Consumer Experience Design, Social Media Marketing with AI, and Neuromarketing

Elective courses can be taken from a cluster of specializations such as marketing, management, finance or entrepreneurship with popular choices by SOM students being Storytelling Using Data, Fintech, Consultancy Skills, Negotiations & Pressurized decision-making, Strategy and Project Management

Career prospects

The digital age has opened up many career opportunities in marketing, from digital marketing managers to social media specialists and e-commerce analysts.

Pursuing an MSc in Digital Marketing can open doors to a variety of job roles within the marketing and advertising industry. The skills and knowledge gained from such a program are highly valued in today's digital economy, where businesses strive to maintain a strong online presence. Here are some types of jobs expected of those who graduate from an MSc in Digital Marketing:

- Digital Marketing Manager
- SEO Specialist
- Social Media Manager
- Content Marketing Manager
- PPC (Pay-Per-Click) Specialist
- Email Marketing Specialist
- Digital Analytics Specialist
- E-commerce Manager
- Digital Marketing Consultant
- Influencer Marketing Manager
- Affiliate Marketing Manager
- Conversion Rate Optimization (CRO) Specialist
- Digital Project Manager
- Mobile Marketing Manager
- Brand Manager

The versatility of an MSc in Digital Marketing means you can work in various industries such as technology, retail, finance, healthcare, and more. The key is to leverage the specific skills and knowledge you've gained from the program to fit the requirements of the job you're interested in.

CONTACT DETAILS

Program Director
Dr Junaid Muhammad
email: junaid@ait.ac.th

Admission Inquiry
email: somadmissions@ait.ac.th

Website
https://ait.ac.th/program/masters-in-digital-marketing/