

# SMART MATERIALS TECHNOLOGY

# ROBOTICS & AI ENGINEERING

DUAL DEGREE

King Mongkut's Institute of Technology Ladkrabang



01

## DUAL-DEGREE

Receive 2 diplomas from  
College of Materials  
Innovation and  
Technology and Faculty of  
Engineering, KMITL



02

## INTERNATIONAL PROGRAM

4-year study  
152 credits  
120,000 baht per  
semester



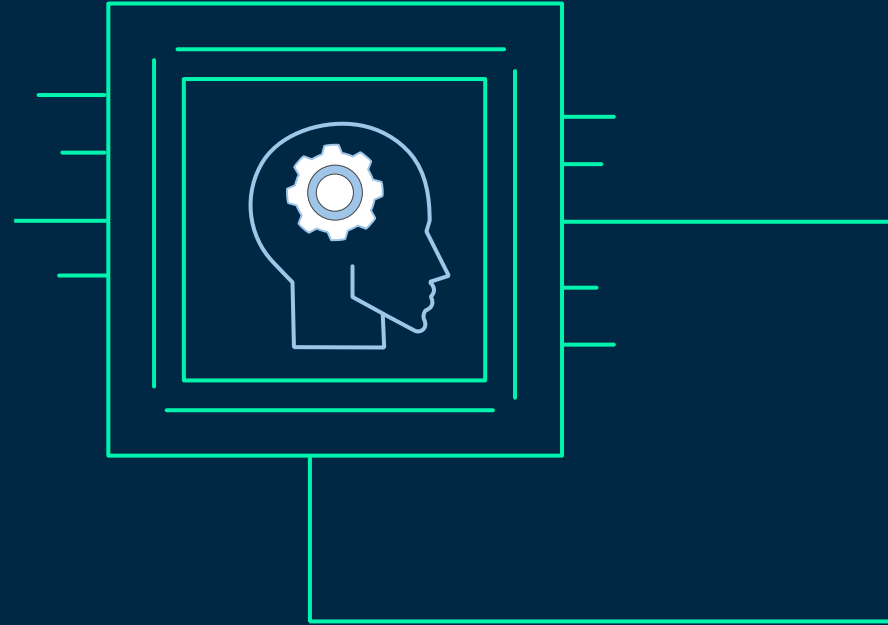
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## FACILITIES

4 co-working area  
4 laboratories  
and more...

# CAREER PATH

- Roboticist or Robotic Engineer
- Startup Entrepreneur in High Technology
- Software Engineer for Mechatronics and Machines
- System Engineer
- AI Engineer
- Machine Vision Engineer
- IoT Engineer
- Robotic Security Analyst
- Expert Systems Analyst
- Machine Designer
- Material Engineer  
and more...



# MAIN SUBJECTS



Robotics Laboratory



Artificial Intelligence  
Technology



Manufacturing  
Process



Energy Storage



Micro and Nano  
Fabrication



Nanosensors

and more...

# CURRICULUM (apart from Robotics & AI)

Year 1:

- CHEMISTRY
- INTRODUCTION TO NANOTECHNOLOGY

Year 2:

- SENSOR TECHNOLOGY
- INTRODUCTION TO PROBABILITY AND STATISTICS
- MICRO AND NANOFABRICATION
- ELECTIVE MANDATORY SUBJECTS FOR SMART MATERIALS TECHNOLOGY

Year 3:

- QUANTUM AND NANOELECTRONIC DEVICES
- APPLICATIONS AND TRENDS OF SMART MATERIALS
- ELECTIVE SUBJECTS FOR SMART MATERIALS TECHNOLOGY
- ELECTIVE MANDATORY SUBJECTS FOR SMART MATERIALS TECHNOLOGY

Year 4:

- MOST OF ELECTIVE SUBJECTS

# IN COLLABORATION WITH ROBOTICS & AI

With the help of smart material (nanotechnology), it can:

- Improve the structure, built, and coating of the object
  - Phone: lightweight, waterproof, rigid body
- The stability of the robot
  - Improve the precision and develop the sensors
    - Improve LiDAR to work in greater distance
- Extends the limits of electronics
  - Improve processors and circuit board by making it smaller and decrease energy consumption while improving its performance
    - Apple's iPhone 12 using 5 nm A14 Bionic processor



and such...

Not just robotics and AI, it can also use to applied in any other field such as biotechnology, energy, photonics, and more!

# REQUIREMENTS

## Education background

- Obtained or expected to receive a qualification equivalent to Matthayom 6
- Graduated from or studying in Matthayom 6 or equivalent

## Academic record

- GPA (at least 4 semesters) 75 percentile
- SAT / GSAT 1020+
- ACT 19+
- IB diploma 29+
- A-level, GAT/PAT, gaokao, depending on professor

## English score

- IELTS 6.0+
- TOEFL 550+
- KMITL-TEP 82+

APPLY NOW!



Direct/TCAS Admission

# FACILITIES



LAB & CLASSROOM



FABRICATION LAB



ROBOTICS LAB



CO-WORKING 1



CO-WORKING 2



NANO LAB

and more...



# PARTNERSHIP WITH...



and many more...

# MORE INFO:



FB: College of Materials Innovation  
and Technology (@CMIT.KMITL)



[www.cmit.kmitl.ac.th/dual-degree](http://www.cmit.kmitl.ac.th/dual-degree)



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