enPiT

Education **N**etwork for **P**ractical **I**nformation **T**echnologies

Overview

Name	Project for Establishing a Nationwide Practical Education Network for IT Human Resources Development **Education Network for Practical Information Technologies**
Abbreviated Name	enPiT
Representative	Dean of the Graduate School of Information Science and Technology, Osaka University Katsuro Inoue
Field Representative	Cloud Computing (enPiT-Cloud) Professor of the Graduate School of Information Science and Technology, Osaka University Shinji Kusumoto
	Security (enPiT-Security) Professor of the Graduate School of Information Security, Institute of Information Security Atsuhiro Goto
	Embedded System (enPiT-Emb) Professor of the Graduate School/Field of Information Science and Electrical Engineering, Kyushu University Akira Fukuda
	Business Application (enPiT-BizApp) Professor of the Graduate School of Systems and Information Engineering, University of Tsukuba Hiroyuki Kitagawa

Cooperating Universities

● Cloud Computing (enPiT-Cloud)	
Osaka University	Graduate School of Information Science and Technology
The University of Tokyo	Graduate School of Information Science and Technology
Tokyo Institute of Technology	Graduate School of Information Science and Engineering
Kobe University	Graduate School of System Informatics
Kyushu Institute of Technology	Graduate School of Computer Science and Systems Engineering
● Security (enPiT-Security)	
Institute of Information Security	Graduate School of Information Security
Tohoku University	Graduate School of Information Sciences
Japan Advanced Institute of Science and Technology	School of Information Science
Nara Institute of Science and Technology	Graduate School of Information Science
Keio University	Graduate School of Science and Technology
	Graduate School of Media and Governance
	Graduate School of Media Design
● Embedded System (enPiT-Emb)	
Kyushu University	Graduate School and Field of Information Science and Electrical Engineering
Nagoya University	Graduate School of Information Science
● Business Application (enPiT-BizApp)	
University of Tsukuba	Graduate School of Systems and Information Engineering
Future University Hakodate	Graduate School of Systems Information Science
Advanced Institute of Industrial Technology	School of Industrial Technology

For prospective students

Let's aim at becoming a world-class engineer

Students in enPiT can acquire leadership and team management skills which are highly required in the industrial world, by sharing learning opportunities with students from other universities, and participating in intensive study camps and group work. This is an ideal opportunity to develop skills, required to be successful in the society , in future .We are looking forward for your participation.

For universities and other educational institutes

We provide practical education by accumulating and sharing knowledge

In enPiT, students can attend courses based on the curriculum offered by associated universities. Mentors at the university offer Training material or Induction courses to acquire PBL implementation know-how and basic fundamental knowledge. We are looking for the Universities interested in training their student and young teachers, to participate in enPiT activities.

For companies

Would you like to cultivate people who will lead next generation?

enPiT cultivates leaders with specialized knowledge as well as Teamwork & communication skills. Getting companies directly involved in this training process is indispensable to effectively implement training program. We are looking forward for your participation as associated companies/partners.

For more information, please visit our Web site!

www.enpit.jp

● Contact Us

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enPiT

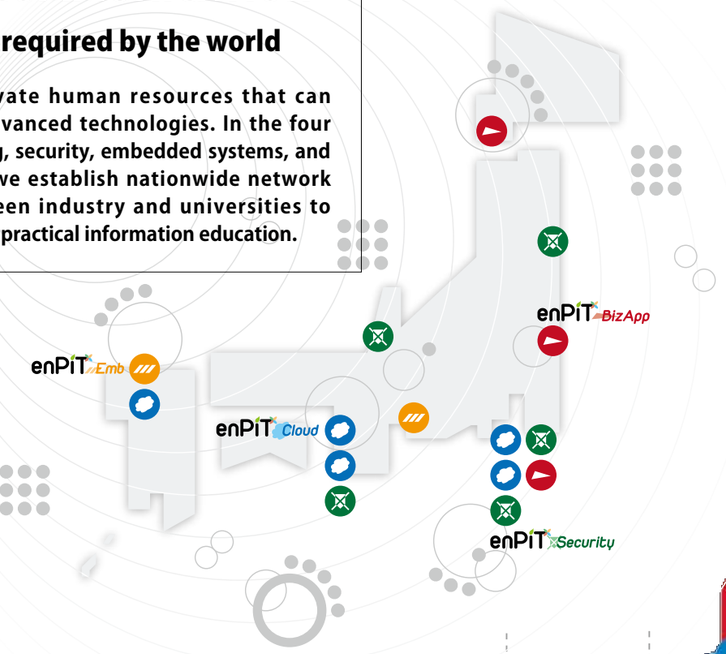
Project for Establishing a Nationwide Practical Education Network for IT Human Resources Development

Education **N**etwork for
Practical **I**nformation **T**echnologies

PRACTICE × COMMUNICATION

Create new values required by the world

enPiT aspires to cultivate human resources that can pragmatically utilize advanced technologies. In the four fields of cloud computing, security, embedded systems, and business applications, we establish nationwide network by collaboration between industry and universities to disseminate and promote practical information education.



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Combine superior expertise of 15 graduate schools nationwide with a wealth of knowhow of the industry

In the enPiT program, university instructors from 15 nationwide graduate schools and company engineers, with specialized expertise in the four fields(cloud computing, security, embedded systems, and business applications) are gathered to provide education in a wide range of knowledge domains in each field. Furthermore, we provide practical information education by cooperating with companies with proven records, in each field.

We cultivate world-class information technology resources with practical capabilities

Katsuro Inoue, Dean of the Graduate School of Information Science and Technology, Osaka University

This modern society faces various problems, and human resources are thus in compelling need to handle these problems by utilizing the information communication technology. The Education Network for Practical Information Technologies(commonly known as enPiT) was established in 2012 by 15 universities. The organization aspires to cultivate human resources with true practical capabilities nationwide, by conducting our advanced education program including short term intensive study camps and distributed PBL, as well as establishing close collaboration with the industry. We are looking forward for your participation in enPiT.

Cultivate human resources that can face specific social challenges

In this project, we establish a Project-Based Learning (PBL) program with a short term study camp and distributed PBL for students who have already acquired the requisite fundamental knowledge in each field.

● Acquire Fundamental knowledge

Students acquire the fundamental knowledge required to participate in a short term intensive study camp, and distributed PBL (contents differ in each field). Participants can attend lectures of cooperating and participating universities in each field, and use materials that are published on edubase.

※edubase: edubase is a service with the purpose of developing an educational and research infrastructure. It consists of an academic cloud environment, a multipurpose learning and research space, and a material publishing Web site (http://edubase.jp).

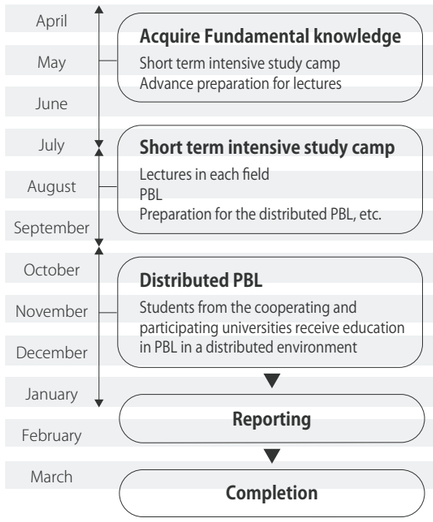
● Short term study camp

Students attend lectures and exercises in each technology field (learn required items such as cutting-edge technology, other than fundamental knowledge), prepare for PBL and distributed PBL. Participants gather at one location (or multiple locations) to receive intensive training for approximately two weeks.

● Distributed PBL

PBL is conducted in accordance with a designated theme in each field in a distributed environment. Attendants present study report after completion of distributed PBL.

● enPiT Framework

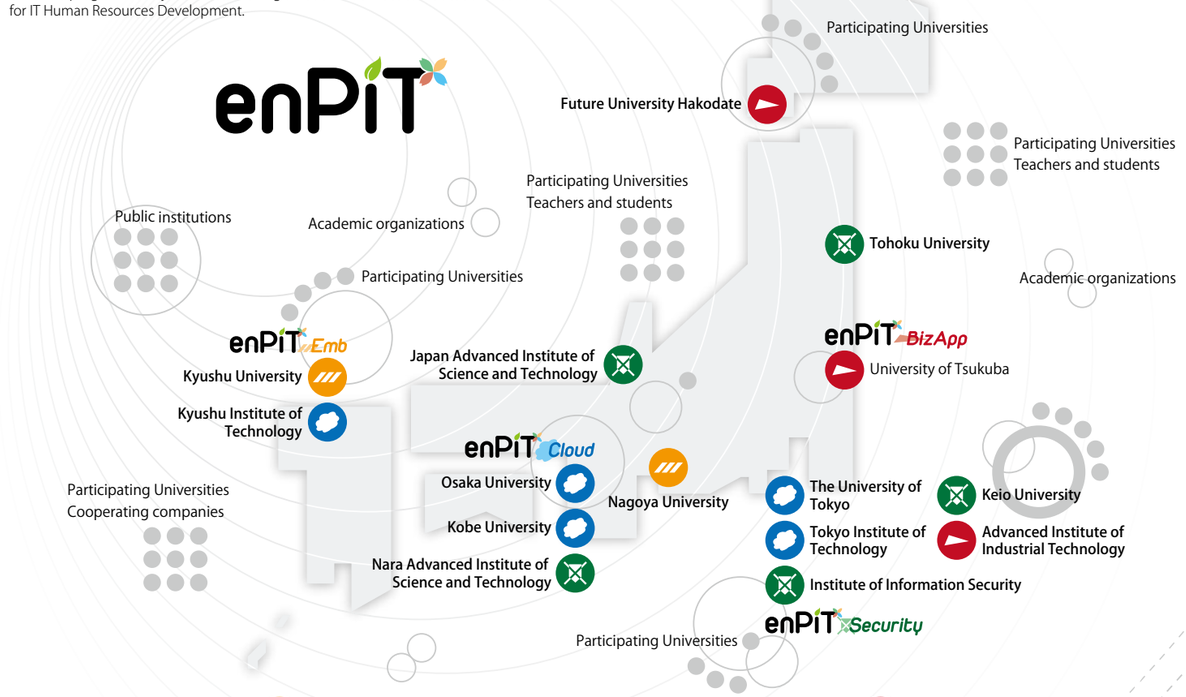


Certificates

Students, who attended the specified number of lectures in each field and successfully completed presentation of PBL, will receive authorized completion certificate with the specified field. The number of lectures and subjects necessary for completion and acceptance/rejection criteria are determined for every field.

Education Network for Practical Information Technologies

enPiT is a program of Project for Establishing a Nationwide Practical Education Network for IT Human Resources Development.



enPiT Cloud

Cloud computing

Human resources who can understand and utilize the essence of the cloud technology

This program cultivates human resources who can utilize cloud technology and overcome actual social challenges such as the big data analytical method and a newly created business field. Attendants form a team to implement an information system in an actual cloud infrastructure. They can also gain practical experience in problem solving methods with the use of cloud technology by enabling mobile compatibility, performing load distribution, scaling, and large-scale data analysis and their results.

PBL theme examples:

- Library management system development based on ticket-driven development
- Visualization and analysis of large-scale data to improve user experience
- Web application load monitoring and scale up/out

enPiT Security

Security

SecCap: Practical security personnel required by the industry

This program trains IT human resources with practical security capabilities, required by the industry, through both exercises of actual environment use and lectures of basic and applied skills. Attendants can practically experience and acquire skills to encounter information security threats and attacks through a wide range of exercise programs including encryption, systems, networks, monitoring and management in the latest practical training environment. Furthermore, they can participate in incident analysis and security implementation hands-on training which security experts need to cope with in the actual society.

PBL theme examples:

- Incident analysis to analyze unknown malware characteristics and behavior
- Security problems related to hardware and countermeasures to detect side Channel attacks
- Necessary risk management technology and measures to provide information services

enPiT Emb

Embedded system

Cultivate human resources who can build a value-added CPS

This program cultivates human resources who can build a value added cyber-physical system (CPS) with an embedded system as the central core. Kyushu University offers an associated PBL, and Nagoya University offers a basic course (mainly for first year students in the master's course) based on OJL (On the Job Learning) and an advanced course (for first and second year students in the master's course). The basic course aims at acquiring problem detecting capability and the advanced course focuses on acquiring advanced problem detecting capability in project management technology and its operational methods.

PBL theme examples:

- MDD robot challenge (airship project)
- Shopping cart system development with the use of NFC and RFID
- Control software redevelopment for automatic dispenser

enPiT BizApp

Business application

Practical problem-solving by utilizing coordinated advanced information technology

This program cultivates human resources, which are required by the industry, with practical problem solving capabilities by utilizing continuously-evolving advanced information technology in coordination with information infrastructures.Attendants learn project-based development, such as system development techniques and software engineering, problem analysis and information designsfor user centered designs, mobile application implementation, documentation, review to ensure high quality and project management technology.

PBL theme examples:

- Operation support system for small and medium sized businesses
- Aquatic resources management support with the use of digital signage
- University education activity high-efficiency system with the use of information