

Internationalization of Education: POSTECH Experience

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ABSTRACT

POSTECH was established in 1986 as Korea's first research-oriented science and technology university. Implementing the founding philosophy of educating a small number of bright students in a research-oriented environment, POSTECH has in its short 20-year history, become the top university in Korea and one of the leading science and technology universities in Asia.

In recent years, the idea of internationalization of education has been the subject of much discourse for universities world-wide. Universities are continuously seeking ways to internationalize their campus and curriculum to provide students with a global frame of mind to answer growing demand for talented, globalized individuals.

POSTECH, in its effort, has pursued providing students' opportunities to participate in outbound programs, recruitment of international students and other international activities on campus to enhance their university experience.

With POSTECH's aim to become one of the world's top 20 research-oriented universities by the year 2020, internationalization is a key strategic policy which the university will aggressively pursue.

Internationalization of Education : POSTECH Experience



**POHANG UNIVERSITY
OF SCIENCE AND TECHNOLOGY**

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- II. Internationalization of Education
- III. Conclusion & Suggestions

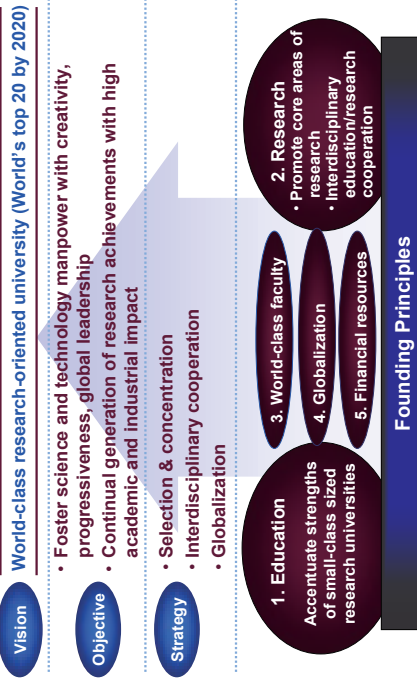
POSTECH Overview



- Founded in 1986
- First research-oriented university in Korea
- 1,638,135 m² Land area
325,362 m² Building area
- Faculty: 229
Researcher: 698
Staff: 206
Student: 2,822 (Graduate 1,505)

(1) PAL: Pohang Accelerator Laboratory
(2) RIST: Research Institute of Industrial Science and Technology
(3) Expected to open in July 2007

POSTECH Vision 2020



POSTECH Overview

International Network

60 sister universities in 15 countries across the world

Country	Number of Universities	Universities
Russia	5	• INRS • Moscow State Univ. • Moscow Eng. Univ. • St. Petersburg State Univ. • St. Petersburg State Polytechnical Univ.
Denmark	1	• Technical University of Denmark
Germany	3	• RWTH Aachen • TU Berlin • TU Braunschweig
UK	2	• Imperial College • Univ. of Birmingham
France	8	• ECN Nantes • Ecole Centrale de Lyon • INP de Grenoble • INP de Toulouse • UT Compiègne • ENSICAEN • Ecole Polytechnique
Switzerland	1	• ETH, Zurich
Italy	1	• Politecnico di Torino
Vietnam	4	• Hanoi Univ. of Tech. • Hanoi National Univ. • Ho Chi Minh National Univ. • VAST
Australia	4	• Univ. of Melbourne • Univ. of Newcastle • Univ. of New South Wales • The Australian National U.
Taiwan	2	• National Taiwan Univ. • National Tsing Hua Univ.
New Zealand	1	• Univ. of Auckland
Japan	6	• Kyoto Univ. • Kyoto Univ. of Education • Ritsumeikan APU • Ritsumeikan Univ. • Tokyo Tech.
USA	8	• CALTECH • Carnegie-Mellon Univ. • Univ. of Illinois • Univ. of Michigan • Univ. of Maryland • Univ. of Minnesota • Univ. of Wisconsin • Univ. of Washington
Canada	1	• Univ. of Waterloo
China	13	• Fudan Univ. • Harbin Univ. of Science and Tech. • Northeastern Univ. • Shanghai Jiao Tong Univ. • Tsinghua Univ. • USTC • USTB • Yunnan Univ. of Sci. and Tech. • Zhejiang Univ.

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Internationalization of Education

Education

Train elite students with global background

Expand int'l education program

Global leadership program

Recruit int'l students

Expand English lectures

Research

Create world-class research outcomes

Strengthen int'l research cooperation

Attract int'l research centers

Recruit int'l faculty/researchers

Invite world-renowned scholars

Infrastructure

Globalization of administration & infrastructure

Korean-English bilingual campus

Research infrastructure

Information infrastructure

Build int'l complex

Int'l Cooperation Strategy

Action Plan

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Expand Int'l Education Programs

Internationalization of Education

Exchange Program (Semester and Year-long Program)

In participation with approximately 20 overseas partner universities

1989-2006 Outgoing Students: 290

Summer Session Program (Summer)

Courses or language training through summer programs in overseas universities

2004-2006 Outgoing Students: 299

Language Training Program (Summer & Winter)

English language training program for early entrance students

2001-2006 Outgoing Students: 299

Cross Strait Symposium

Tri-party symposium for graduate students of POSTECH, Busan National University & Kyushu University

1999-2006 Participants: 228

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Expand Int'l Education Programs – Planned

Study Abroad Program (Semester and Year-long Program)

To expand outgoing students for semester & year-long program (students' need)
Solve the imbalance problem of exchange student numbers
Student Limit: 10 (annually)
Cost: Pay tuition fees (negotiable)
Credit Transfer: Same as exchange program
Partner University: U of Minnesota, UC Berkeley, U of Columbia and etc

Internship Program (Summer and Winter)

Internship or Research Program at overseas universities
Exchange students among member countries through IAESTE*
Student Limit: 20 (annually)
Cost: Living Expenses & stipend (negotiable)
Credit Transfer: N/A
Partners: University, Company, Research Institution

*IAESTE: The International Association for the Exchange of Student for Technical Experience

Global Leadership Programs

Global Leadership Programs for POSTECH Students

Annual Student Camp by 17 AEARU member universities
1997-2006 Outgoing Students: 64

Bang Doshie Global Expedition
Funded with an endowment from Mrs. BANG Doshie
2000-2005 Outgoing Students: 46

Study Tour for Student Leaders
Visit several universities and research institution abroad
2004-2005 Outgoing Students: 28

Recruit International Students

Int'l Student Recruiting Activities (Degree-seeking)

Activity	Particulars
Study Fair	Shanghai, Peking, Hanoi, Delhi
Recruiting Visit	Fudan U, SJTU, Zhejiang U, USTC, HIT, Tsinghua U, Peking U, USTB, Nanjing U
Recruiting Visit & Provide English Test	HUT, HUS
Networking Convention	POSTECH-Partner Universities Networking Convention (PNC) 2005
DM	Prospective Students (Campus News, Research Accomplishments, PR Materials, and etc)
Department Visit	Promotional Faculty Group Visit

Planned

Recruit International Students

POSTECH-Partner Universities Networking Convention 2005

Purpose

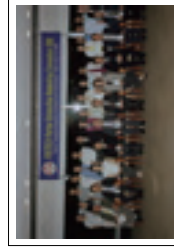
Invite partner universities' administrators
Introduce POSTECH campus, education environment and degree program
Exchange ideas and future cooperation

Participants

12 from 10 universities in China and Taiwan
Fudan U, HIT, Nanjing U, NTU, SJTU, Peking U, Tsinghua U, USTB, USTC, Zhejiang U

Main Program

Campus tour, degree program introduction and department visit
Meeting with President and home university alumni
Networking and discuss future cooperation



Int'l Student Enrollment / Department (2002~2006)

Department	2002	2003	2004	2005	2006	Total
Mathematics				1	1	2
Physics	1		1			2
Chemistry	2	2	2	1	3	10
Life Science			1	2		3
MSE	4			2	1	7
IME	1	1	1	1	1	5
EEE	2	3		2	3	10
CSE	2	1			1	4
Chemical Eng	2	1			1	4
SEE	3	2	2	5		12
GSIT	1	3	3		1	8
GIPT	9	6	13	15	4	47
Total	28	19	25	30	17	119

Incoming Exchange Program (1988-2006)

General/Exchange Program

- Take courses
- Semester or year-long program

Research Program

- Participate in research projects
- Several months or year-long program

Combined Program

- Combination of the two programs above

Country	Number
USA	25
UK	4
Canada	12
Australia	14
Germany	22
Denmark	1
France	26
Japan	2
China	17
Taiwan	4
Russia	2
Others	11
Total	140

English Lectures (2002~2006)

Year	2003	2004	2005	2006	2007	2010
Undergraduate	14.3%	17%	17.6%	16.8%	30%	100%
Graduate	29.6%	28.3%	26%	33.5%	50%	100%
Total	22%	22.7%	21.8%	25.2%	40%	100%

University Development Key Indicators for POSTECH Vision 2020

Policy to Increase English Lectures

- Korean Government promotes English lectures
- BK21 Program, IT Scholarship
- Recruit international faculty and students
- New faculty are supposed to teach ALL lectures in English
- Provide additional stipend to faculty who gives English lectures
- Promote English seminars and group meetings

Invite World-Renowned Scholars

Guest Lecture Program
- Invite Fields/Nobel laureates or world-renowned scholars
- Funds for development of science and technology

Year	Area	Lecturer	Position / Prize
1991	Physics	Norman F. Ramsey	Harvard Univ. / '89 Nobel Prize (Physics)
1992	Chemistry	Derek Barton	Texas A&M Univ. / '69 Nobel Prize (Chemistry)
1994	Life Science	Bert Sakmann	Heidelberg Univ. / '91 Nobel Prize (Medical Science)
1995	Mathematics	John Milnor	New York State Univ. / '62 Fields Medal
1997	Physics	Ilya Prigogine	Prigogine Center / '77 Nobel Prize (Chemistry)
1999	Chemistry	Jean-Marie Lehn	Univ. of Louis Pasteur / '87 Nobel Prize (Chemistry)
2001	Mathematics	Efim I. Zelmanov	Yale Univ. / '94 Fields Medal
2001	Political Science	Robert A. Scalapino	UC Berkeley
2002	Life Science	Paul Greengard	The Rockefeller Univ. / 2000 Nobel Prize (Physiology)
2004	Physics	Robert B. Laughlin	Stanford Univ. / '98 Nobel Prize (Physics)
			- POSTECH Chair-Professor
2006	Mathematics	Jean-Christophe Yoccoz	College of France / '94 Fields Medal
	Chemistry	Roderick MacKinnon	The Rockefeller Univ. / 2003 Nobel Prize (Chemistry)

Korean-English Bilingual Campus

Provide Online Information in Korean/English
 POVIS (POSTECH Vision Information System)
 POSTECH website

Provide Offline Information in Korean/English
 All text books are in English
 PR materials, guidebook and official documents
 Signboards and placards

Improve University Administrators' English Proficiency
 One of the important requirements for promotion
 Provide overseas language training and experience
 POSTECH Language Center

POSCO International Complex

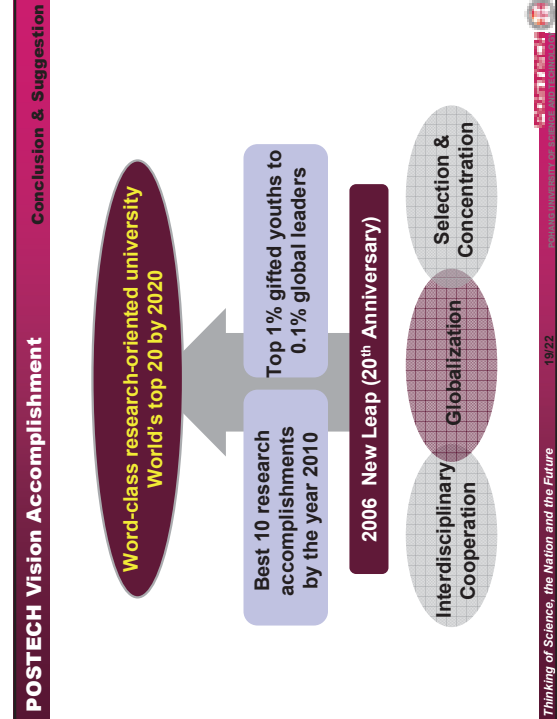
- Purpose: Aid POSTECH in expanding cooperative relationships and enhancing competitiveness among global universities
- Expected completion: July 2007
- Area: 20,491 m² (6 ground, 2 basement levels)
- Main facilities: conference area (convention, accommodation & board, convenience facility)



I . POSTECH Overview

II . Internationalization of Education

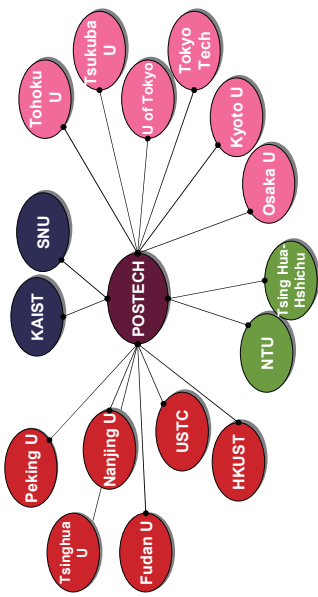
III. Conclusion & Suggestions



AEARU Exchange Programs
 Asian community programs among AEARU members

- Main Activities**
- Student & teacher exchanges
 - Joint development of study program
 - International intensive program
 - Thematic networks between departments & faculties
 - Languages courses
 - AEARU credit transfer system

AEARU Exchange Program
 Association of East Asian Research Universities, AEARU
 17 Universities in East Asia from China, Hong Kong, Japan, Korea and Taiwan
 Activities: 10 science & technology workshops and 2 student camps annually



For more information contact
 POSTECH International Affairs Office at
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