自強不息 · 知行合一

NORTHEASTERN UNIVERSITY

Software College

of

Northeastern University

Map of China

Locations of provinces, autonomous regions and municipalities.

Heilongjiang
Jilin
Liaoning
BEIJING
Tianjin
Hebei
Inner Mongolia
Xinjiang
Gansu
Ningxia
Shanxi Shandong
Qinghai
Shaanxi
Henan
Jiangsu
Tibet
Sichuan
Hubei
Anhui
Shanghai
Chongqing
Zhejiang
Jiangxi
Hunan
Guizhou
Fujian
Yunnan
Guangxi
Guangdong
Taiwan
Hong Kong
Hainan
Islands of South China Sea

Islands of South China Sea

★ **Located in Shenyang, Liaoning Province, northeast China.**

Shenyang City

★ **Capital of Liaoning Province**

★ **One of the Top 10 cities in China**

★ **Economic, cultural, traffic and trade center of northeast China**.

★ **Historical City**

★ **Host city of National Sports Game 2013**

Shenyang City- Famous Sites

★ **Imperial Palace**

Shenyang used to be the capital
of **Qing Dynasty** (1616-1644)

Shenyang City- Famous Sites

★ **Natural scenery**

NEU Overview

Software College Introduction

International Cooperation of Software College

NEU Overview

Introduction to Software College

International Cooperation of Software College

History of **NORTHEASTERN UNIVERSITY**

★ was founded in 1923.

★ In 1928 the patriotic General Chang Hsueh-liang was being the president.

★ In 1960, was ranked as one of the 64 national key universities.

★ In 1998, was subordinate to the Ministry of Education, China.

★ Being constructed jointly by the Ministry of Education, Liaoning Province and Shenyang City.

NEU at a glance

★ **One of the 112 universities of "211" Project**

★ **One of the 38 universities of "985" Project**

★ **2,463 faculty members**

★ **25,793 undergraduate students**

★ **5,928 graduate students**

★ **2,925 Ph.D students**

NEU at a glance (cont.)

★ **Distinctive features:**
The efforts of enterprises, universities and research institutes are integrated

★ **First level disciplines:**
Metallurgy, Materials, Mining, Machinery, Automation, Computer Science, Software Engineering.

NEU at a glance (cont.)

★ **Scholl and Colleges :**
  Qinghuangdao Branches, the Graduate School, 15 schools and the Department of
  Physical Education.
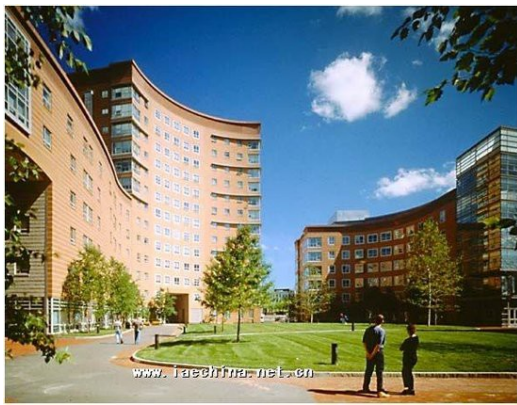
★ **Degree Program:**
  66 undergraduate programs , 181 graduate programs, 100 Ph.D programs

NEU Campuses

★ **NanHu Campus**, covering a total area of 1.81 million square meters

★ **HunNan Campus**, covering a total area of 891 ,700 square meters

NanHu Campus

HunNan Campus

NEU Campuses

★ **Fundamental School**, covering a total area of 220 ,000 square meters

★ **Qinhuangdao Branch**, covering a total area of 470,542 square meters

Fundamental School

Qinhuangdao Branch

software creates value

Education refines soul

NEU Overview

Introduction to Software College

International Cooperation of Software College

SC at a glance

★ **One of 37 National Pilot Software Colleges**

★ **1,746 Undergraduate Students**

★ **1,951 Graduate Students**

★ **97 faculty and staff**

SC Achievements

★ In 2003 and 2006, Software College successfully passed the evaluation for national pilot software colleges by the Ministry of Education, China.

★ Software College got one National Teaching Team.

★ Software College has 1 excellent course of national level, 4 excellent courses of Ministry of Education, IBM and Microsoft.

★ Software College has won 1 teaching achievement prize of national level and 4 teaching achievement prizes of provincial level.

★ In 2004, Software College became National Training and Promotion Center for Linux Technology.

SC Achievements (cont.)

★ **In 2008, Software College became Education Center for IBM POWER SYSTEM, National Innovation Experimental Area for training advanced practical software talents, and International Training Center (Shenyang) for Chinese Software talents.**

★ **In 2008, Software Engineering Specialty became the Characteristic Specialty approved by Ministry of Education, China.**

★ **In 2011, Software College won Teaching Achievement Prize and "11th Five Year Plan Quality Project" Prize among national pilot software colleges.**

★ **In 2012, Software College became National Demonstration Center for Experimental Teaching.**

★ **In 2012, Software College became National Center for Engineering Practice Education which is jointly developed by universities and enterprises approved by Ministry of Education, China.**

★ **Vision**

   To be a international and first class national pilot software college of China.

★ **Mission**

   Train the students to be practical, interdisciplinary and international professionals who can meet the demands of industry.

★ **Features**

◆ **Innovation being the prerequisite**
◆ **Cooperation between the colleges and enterprises being the approach**
◆ **Enterprises' demand being the guide**
◆ **Capability training being the core**
◆ **Talents fostering quality being the fundamental**
◆ **Reform and innovation being the engine**

Degree Program

★ **Undergraduate Specialties**: **Software Engineering**
                                         Information Security
                                         Digital Media Technology

★ **Graduate Specialties** : **Software Engineering (Academic Degree)**
                                Software Engineering (Professional Degree)

★ **Ph.D**.: **Software Engineering**

Education >>> Undergraduate Program

Software Engineering

■ Education Objectives:

Train students to grasp the basic theories of software development and management and train students engage into software requirement analysis, design, development and project management. They will be practical, interdisciplinary and international professionals who can meet the demands of the information industry.

Education >>> Undergraduate Program

Information Security

■ **Education Objectives:**

Make students master the basic theoretical knowledge of information security and related technologies, gain a good command of network security capability and safety system design. Strong English language skill, good humanistic qualities, innovation spirit, teamwork and professional ethics are also stressed.

Education >>> Undergraduate Program

Digital Media Technology

■ **Education Objectives:**

Train students to master the basic theory, professional knowledge and basic skills of computer science and software development. Graduated students can master the core technology and design standards of digital media. Train students to possess strong practical ability and basic audio-visual arts literacy, artistic originality ability, the ability to research and develop virtual reality, animation and game support software.

Education >>> Master Program

Software Engineering

■ **Education Objectives:**

A firm grasp of the basic theory and systematic professional knowledge of computer science and technology. Be familiar with and master research trends, advanced technical methods and technical means in the professional field. Have the ability to engage in scientific research, teaching or specialized technical work. Can skillfully read foreign materials in this discipline and have a command foreign language speaking and writing skill as well.

Education >>> Master Program

Software Engineering (continued)

■ **Research Areas:**

Academic Degree

- Complex system theory and application technology
- Multimedia application technology
- Mass data computing
- Network and information security
- Trusted software technologies
- Virtual and simulation technology

Education >>> Master Program

Software Engineering (continued)

■ **Research Areas:**

Professional Degree

- Software services and applications
- Mobile Internet technology
- Clouding computing and application
- Game and animation technology
- Software development and process management
- Information system security and application
- Chaos fractal and complex network application technology

Education >>> Ph.D Program

Software Engineering

■ **Education Objectives:**

Mastery of a solid rudimentary knowledge and systematic professional knowledge in the discipline of software engineering; understand the cutting-edge research in the discipline and have the ability to carry out relevant research. Students should have some original research achievements; possess the ability of undertaking scientific research or the ability to take on the work of engineering technology; can skillfully read foreign materials in this discipline and have a command of foreign language speaking and writing skills as well.

Education >>> Ph.D Program

Software Engineering

■ **Research Areas:**

. **software services and applications**

. **network and information security**

. **trusted software technology,**

. **methods and techniques of software engineering,**

. **multimedia**

. **software engineering,**

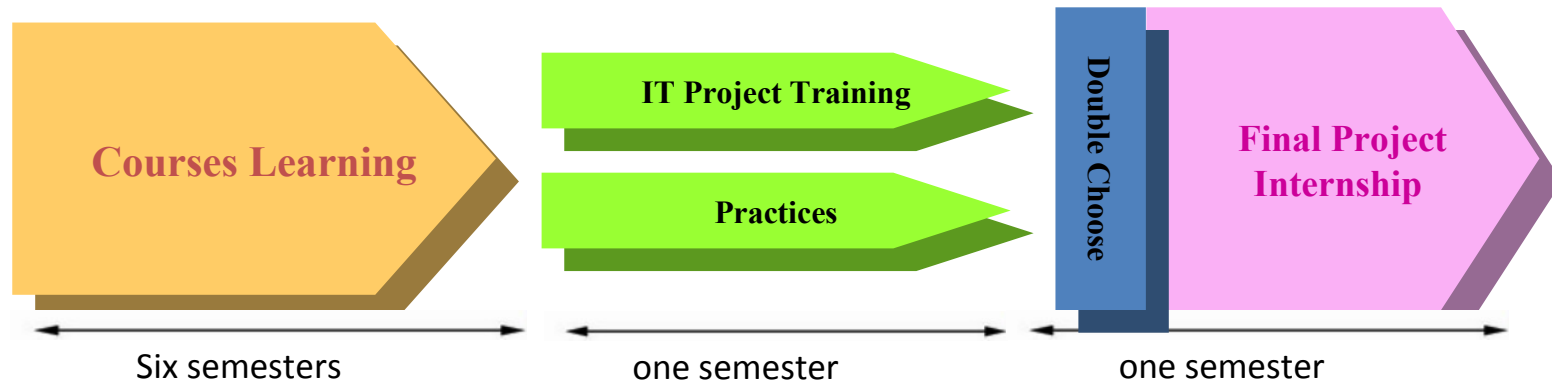. **software development and process management.**

Training Characteristics

★ **611 mode:** **The college actively reforms and innovates teaching mode , proposing 611 mode, i.e. among the 4 years of undergraduate study, there are 6 semesters' course learning, one semester's technical training and one semester's graduation design. This ensures the students to have project development capacity and experience before employment, thus enhancing their competitiveness.**

Courses Learning

IT Project Training

Practices

Double Choose

Final Project Internship

Six semesters — one semester — one semester

Faculty Members

★ **Full-time: 60**

Professor: 4

Associate professor: 16

★ **Part-time: 150**

Foreign teachers: 27

Industry experts: 52%

Research

Research Institutes :

- ◆ **Institute of Software Engineering**
- ◆ **Institute of Information Security**
- ◆ **Institute of Digital Media Technology**

Research

Labs:

◆ **Lab for Information Security Assurance**

◆ **Lab for Content Security Technology**

◆ **Lab for Network Security**

◆ **Lab for Chaos Fractal Theories and Applications**

◆ **Lab for Service Science**

◆ **Lab for Information Systems Engineering**

◆ **Lab for Digital Media Technology**

◆ **Lab for Multimedia Medical Information Processing Technology**

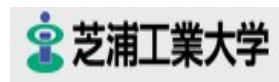◆ **Lab for Information Integration Technology**

NEU Overview

Software College Introduction

International Cooperation of Software College

Famous universities which SC cooperates with

Famous enterprises which SC cooperates with

Microsoft

CISCO

NIIT

HITACHI
Inspire the Next

IBM

NEUSOFT 东软

I CS&S 中软国际

HOYA

hp

Google 谷歌

Baidu 百度

ORACLE

bea

International class (English) of Software Engineering

★ **A special class which has its own training program**

★ **Strengthen English abilities of the students.**
 students are required to pass CET4 in 1st **semester,**
 pass CET6 the 2nd **semester,**
 communicate freely with foreign teachers from 2nd year.

★ **90% of compulsory professional courses are given by foreign teachers**

★ **Students may have more opportunities to study aboard.**

★ **Students are supposed to become the talents with a solid capability of English skill and professional skills**

The teacher from Dublin City University （Ireland ）

The teacher from Aberystwyth University (UK)

The teacher from IBM

International class (Japanese) of Software Engineering

★ **Another special class of the software engineering major .**

★ **Strengthen both Japanese and English abilities of the students.**
students are required to **pass CET4 in 1st academic year,**
pass N2 in 2nd year,
communicate freely with Japanese teachers from 3rd year.

★ **Students may have more opportunities to study aboard.**

★ **Students are supposed to become the talents with a solid capability of Japanese skill, English skill and professional skills.**

Students who graduated from our college working in Japan.

The students from international class (Japanese) are taking the examination of Hitachi.

Training Projects of Japanese System Development

for International class (Japanese) of Software Engineering

★ **Experts from The Institution of Professional Engineers, Japan deliver courses about Japanese system development, and instruct students to practice, for enhancing students' comprehension of Japanese system development and Japanese IT enterprises workflow.**

★ **June to August every year, about four weeks.**

★ **Reference book:**
   Software International Development and Development Management

Training Projects of Japanese System Development
for International class (Japanese) of Software Engineering

Japanese experts are giving lecture to international class (Japanese) of Software Engineering

Joint-Degree Programs

★ **2+2 Program, NEU and Univ. of Missouri Columbia, USA**
★ **2+2 Program, NEU and the Univ. of Colorado in Boulder , US**
★ **2+2 Program, NEU and Monash Univ., Australia**
★ **3+1.5 Program, NEU and Univ.of Wollongong, Australia**

★ **3.5+1.5 Program, NEU and Dublin City Univ., Ireland**
★ **3.5+1.5 Program, NEU and Aberystwyth Univ., UK**
★ **3+1+1 Program, NEU and Loughborough Univ., UK**
★ **3+2 Program, NEU and Univ. of Missouri Columbia, USA**
★ **3+2 Program, NEU and Missouri Univ. of S&T, USA**

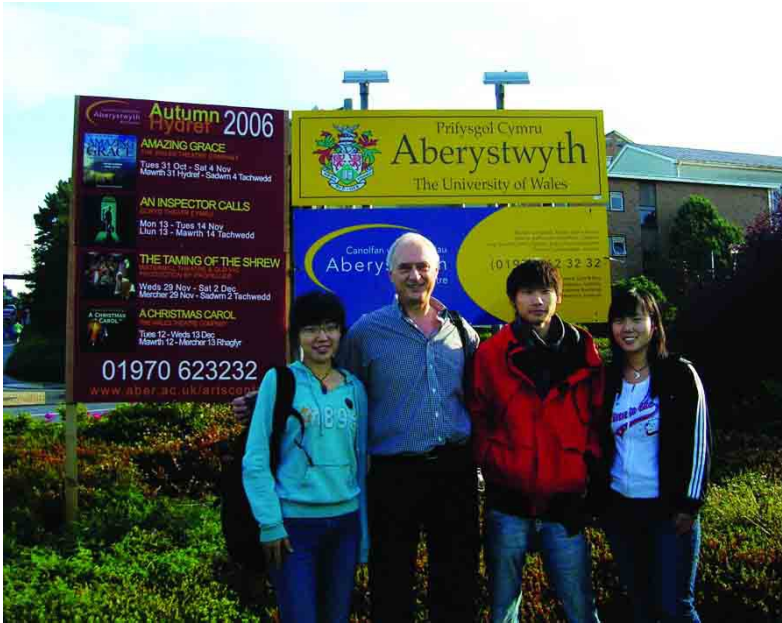★ **1+1 Double Master Degree Program, NEU and Hosei Univ., Japan**

Joint-Degree Programs (pending)

★ **2+2 Program, NEU and Dalhousie Univ., Canada**

★ **3+2 Program, NEU and Dalhousie Univ., Canada**
★ **3+1+1 Program, NEU and Univ. College Cork, Ireland**

★ **1+1 Double Master Degree, NEU and Dublin City Univ., Ireland**
★ **1+1 Double Master Degree, NEU and Univ.of Pavia, Italy**

Joint-Degree Programs

NEU Students and their tutor in Aberystwyth University

Our students are in the UK.

Students Exchanges

★ **NEU** & **Stanford University, USA**

• **Contents of short-term Research for the NEU students**

(1) Courses
- ◆ **IT courses**
- ◆ **Vocational courses**
- ◆ **Outward courses**

(2) Cultural Experiences
- ◆ **Visiting famous universities and companies of USA**
- ◆ **Visiting the United Nations**
- ◆ **Tour and sightseeing of California**

Students Exchanges

★ **NEU** ＆ **Ritsumeikan University,Japan**

- **Contents of short-term Research for the Ritsumeikan University students**

(1) Courses

◆ **Chinese courses** ◆ **Professional courses**

(2) Cultural Experiences

◆ **Tour and sightseeing of Beijing and Shenyang**

◆ **Experience of tea ceremony**

Students Exchanges

★ **NEU** & **Ritsumeikan University, Japan**

- **Contents of short-term Research for the NEU students**

    (1) Courses

    ◆ **Japanese courses**
    ◆ **Professional courses**

    (2) Cultural Experiences

    ◆ **Tour and sightseeing of Kansai**
    ◆ **Experience of tea ceremony**

Students Exchanges

★ **NEU** & **Loughborough University, UK**

- **Contents of short-term Research for the NEU students**

(1) Courses

◆ **English courses**   ◆ **Professional courses**

(2) Cultural Experiences

◆ **Tour and sightseeing of Loughborough and London**

◆ **Visiting famous software enterprises**

Students Exchanges

★ **NEU** & **the University of Utah , USA**

- **Contents of short-term Research for the NEU students**

  (1) Courses

  ◆ **English courses**   ◆ **Professional courses**

  (2) Cultural Experiences

  ◆ **Tour and sightseeing of Salt Lake City**
  ◆ **Living with American family**
  ◆ **Visiting elementary school of USA and introduce Chinese.**

Overseas Final Projects

★ **Final Project in Dublin City University, Ireland**

★ **Final Project in Aberystwyth University, UK**

Student of SC is in DCU

Courses Delivered by Foreign Teachers

1. Information Retrieval,   **Cathal Gerard Gurrin**

(Dublin City University)

2. Technical Communication for Scientist ,   **Michael Gaidis**

(IBM T.J Watston Research Center)

3. Introduction to Programming, **Christopher William Loftus**

(Aberystwyth University)

4. Introduction to Computer Hardware, OS and Unix Tool,

Richard Shipman (Aberystwyth University)

5. Software Development, **Nigel HARDY,**

Courses Delivered by Foreign Teachers

6. *IT Service Management,* **Jingde Cheng**
   (Saitama University)

7. *Advanced Operating System*, **Xiaowei Xu**
   (University of Arkansas at Little Rock)

8. *Information Technology Service Management*, **Zong Ling**
   (IBM (Silicon Valley) Almaden Research Center)

9. *Object Oriented Analysis, Design and Implementation*,
   William Gerard Tuohey (Dublin City University)

10. *Introduction to Database*, **David Sinclair**
    (Dublin City University)

Courses Delivered by Foreign Teachers

11. Software Engineering, **Chris Price**

(Aberystwyth University)

12. Program Design, Data Structure and Algorithms, **Fred Long**

(Aberystwyth University)

13. Web Application Development, **Mark Hughes**

(Dublin City University)

14. Network and Internet, **Brain Stone**

(Dublin City University)

Courses Delivered by Foreign Teachers

15. Software Testing Technology,   Neil Taylor
                                                 (Aberystwyth University)

16. Software Architecture and Design Pattern,   Deepak Heble
                                                 (Chiway Education Group)

17. Software Requirement Analysis and Design, John Pendlebury
                                                 (Dublin City University)

18. Data Communication Security Technology ,   David Price
                                                 (Aberystwyth University)

Courses Delivered by Foreign Teachers

19. *Digital Content Management and Copyright Protection ,*
                              Xiaoqi MA (Nottingham Trent University)

20. *Computer Network,* **John Pendlebury**
                              (Dublin City University)

21. *Java Programming and Design*, **Robert Hoehndorf**
                              (Aberystwyth University)

22. *Security Technology and Quality of Service for Business Data Communications,* **Dave Price**
                              (Aberystwyth University)

Courses Delivered by Foreign Teachers

23. *Principle of Computer Composition* ,   Collin Machin
(Loughborough University)
24. *C++ Programming and Design,* Kevin Oldham
(Loughborough University)
25. *Object-Oriented Programming and Design*, Roger Knott
(Loughborough University)
26. *Software Engineering ,* 后藤佑一
(Saitama University)
27. *Software Process Improvement and Project Management* ,
Deepak Heble(Chiway Education Group)

Joint Research

★ **Research Office of Multimedia Medical Information Technology**

    by NEU & Univ. of Sydney

★ **Joint Lab for Information System Engineering**

    by NEU & Saitama Univ.

★ **Multi-modal Knowledge Management Lab**

    by NEU & Dublin City Univ.

★ **Joint Media Lab**

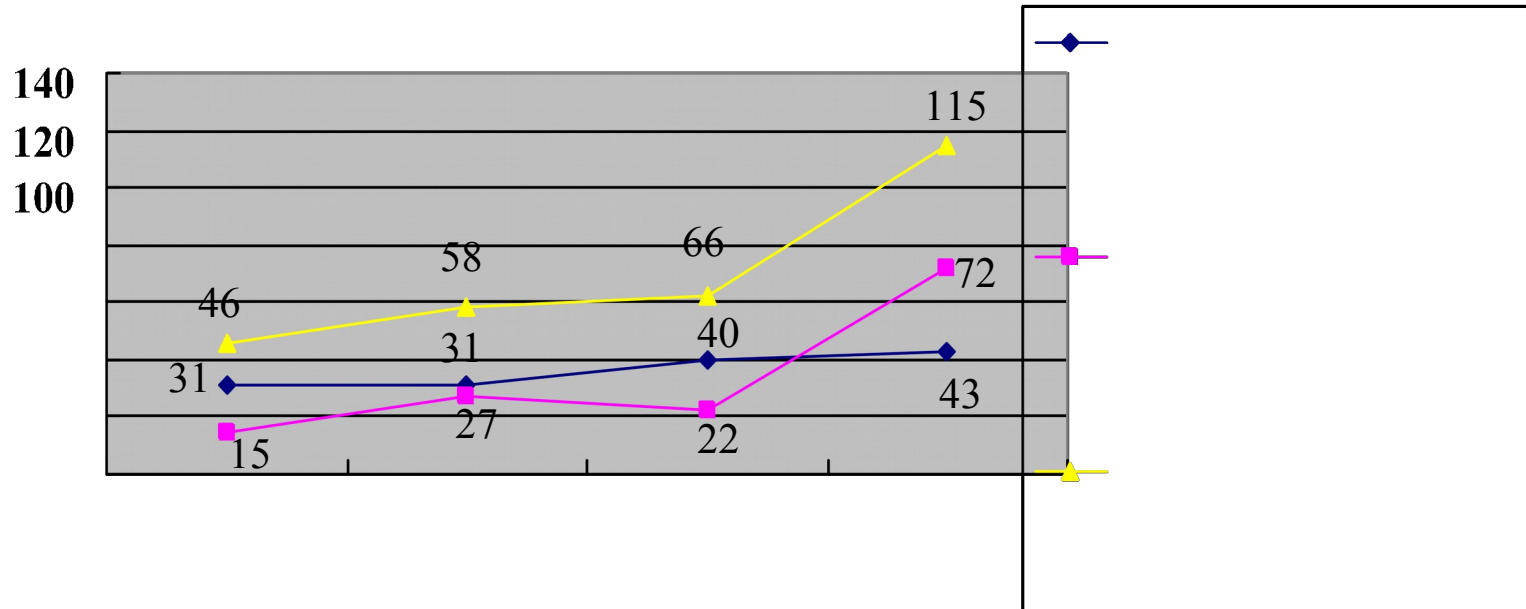   **by NEU & Ritsumeikan Univ.**

Statistics of International Exchange

★ **Statistics of Students going abroad**

Year	Pogram				Total
	Joint Degree	Long and Medium Term	Going abroad after graduation	Short Term	
2010	2	0	31	13	46
2011	0	5	31	22	58
2012	4	8	40	10	62
2013	12	22	43	38	115
Total	16	35	145	83	279

Statistics of International Exchange

★ **Number of Students going abroad**

Overseas Students Recruiment & Education

★ **Graduate Program for Overseas Students**

- **Start from September, 2013**
- **Major: Software Engineering**
- **Length of Schooling: 2.5 years**
- **Features:**

  (1) English Taught Program
    - ◆ **All courses (except Chinese language and Chinese culture) are given in English by qualified teachers or experts. Some of which are invited from renowned universities and enterprises of UK, USA, Ireland, etc.**

  (2) Collaborate with International IT Enterprises
    - ◆ **Through in-depth cooperation between SC and Neusoft, the students who join in the graduate program will stay in Neusoft at least half of one year in order to experience professional courses, project training and internship**

Overseas Students Recruiment & Education

★ **Statistics of Overseas Students**

Degree Program	Num.	Year
Master	1	2010
PhD	1	2012
PhD	1	2013
Master	9	

Objectives of Internationalization (By the end of 2014)

★ **5-20-30-30 Plan**

. **Recruiting 5 full-time foreign teachers.**

☆ Professor: 1 or 2   ☆ Associate professor: 1 or 2   ☆ Lecturer: 2 or 3

. **Proportion of students who go aboard for exchanging, further study and working.**

☆ 15% of all students   ☆ 20% for Software Engineering major

. **Setting about 30 courses which are delivered in English.**

☆ Postgraduate courses: 10   ☆ Undergraduate courses:20

. **Recruiting 30 overseas postgraduate students per year.**

. **Promoting faculty exchange between our college and foreign universities.**