2017

ANNUAL REPORT

VIET NAM NATIONAL UNIVERSITY - HO CHI MINH CITY

Vision

VNU-HCM aims to build a university system in the top of Asia, a university for the convergence of Vietnam's science, technology, culture and knowledge.

Mission

VNU-HCM is a home for talented lecturers and talented students where high quality human resources are trained, key scientific researches are created; it isalso one of the pioneers in important innovations and contributions to the national development, promoting the social progress.

VNU-HCM is governed, operated and managed under the model of exemplary university system with a high autonomy mechanism and a high level of self-responsibility to society in combination with its self-controllingand building an environment for scientific creativity, academic freedom within an exemplary university town.

OVERVIEW

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Assoc. Prof. Dr. Huynh Thanh Đat

Message

OF VNU-HCM PRESIDENT

IN 2017, VNU-HCM WAS THE 142ND IN THE QS ASIA RANKINGS, FIVE STEPS HIGHER THAN THE RANK IN 2016. ESPECIALLY, THIS YEAR HAS WITNESSED VNU-HCM TO BE THE LEADER IN VIETNAM'S EDUCATION SYSTEM IN RESPECT TO TWO IMPORTANT CRITERIA LISTED IN THE QS ASIA RANKINGS, NAMELY ACADEMIC REPUTATION AND EMPLOYER REPUTATION.

This achievement demonstrates the efforts of VNU-HCM in it simplementation of the Prime Minister's direction and the strategic plan of striving to be in the top 100 Asian universities and become aninternational university in the period 2020-2025.

Looking back on the year 2017

In 2017, VNU-HCM approved the entire strategic planning system of its member units and subordinates, creating favorable conditions and high autonomy for the units' operation and development. Since then, the quality of education, especially the quality of training, and the scientific research are of primary concern.

International integration of education quality is a long standing aim that VNU-HCM has extensively pursued and carefully prepared. First of all, VNU-HCM developedinternational standard programs (talented-student program, high quality program, PFIEV program, AUN-QA program, etc.), and International affiliate programs as well as formed the international standard learning environment, helping students approach modern learning methods.

At the same time, VNU-HCM also applied the training model under the CDIO approach, providing the VNU-HCM faculty with active teaching methods and possibly supporting the learners in maximizing their competences and creativity. With these achievements, VNU-HCM will deploy the 4.0-based education model based on the CDIO platform in the coming period.

VNU-HCM is committed to transparency in the quality of education for society as well as its stakeholders. Currently, VNU-HCM has achieved its quality assurance at both the university and program levels granted by reputable national and international accreditation organizations.

Accordingly, the five member universities including the University of Social Sciences and Humanities, the University of Science, the International University, the University of Economics and Law, and the University of Technology have been accredited by Vietnam's Ministry of Education and Training. Particularly, the Ho Chi Minh City University of Technology achieved two international accreditation standards, namely HCERES and AUN-QA. Itcan be affirmed that VNU-HCM has always maintained its leading position in the nation inrespect to the number of programs ofinternational accreditation standards.

The culture of scientific research continues to spread throughout the system, affirming the pioneering position of VNU-HCM with its team of leading scientists. In 2017, many scientists of VNU-HCM were honored with national and international awards such as the Ta Quang Buu Award, Kovalevskaia Award –the only scientist award of Vietnam in Top 100 leading scientists in Asia, the First prize of ASEAN-US Science Award ... The dedication of the scientists with their awards is the most authentic testimony to the determination to reach the academic height, affirming the image of VNU-HCM on the international academic map.

In 2017, VNU-HCM continued to cooperate with prestigious universities and research institutes such as MINATEC and INPG (France), University of California (Los Angeles, USA), built up strong scientific and technological staff, and developedpeak research.

As at September, 2017, VNU-HCM had 1,772 articles and reports in all fields published. Among them, 670 articles were published in national journals and 372 articles in international journals. At the same time, in the first 10 months of 2017, the unit members of VNU-HCM implemented 762 contracts for technology transfer, and science and technology services with a total revenue of VND 128.9 billion.

Also in 2017, VNU-HCM signed cooperation agreements with national partners like Ninh Thuan, Quang Ngai, Binh Duong, Ben Tre provinces, and deployed several diversified programs and projects, including: training high quality human resources, conducting research and technology transfer, improving the quality of life of people. They all contributed to the local economic and social promotion. In particular, the establishment of VNU-HCM campus in Ben Tre province has been considered an important long-term strategic plan for training and nurturing human resources in the Mekong Delta.

Identifying that "Integration of quality education" is the theme of the year 2017, VNU-

HCM continued to expand its network of cooperation with prestigious universities in Europe (France, UK), North America (USA, Canada), Australia (New Zealand) and East Asia (Japan, Taiwan)... In addition, VNU-HCM promoted the credit transfer among universities in the Southeast Asia, successfully hosted the talks of leading international scholars such as Prof. Drew Gilpin Faust - Harvard University President, Prof. Gerard't Hooft - the theoretical physicist who won the Nobel Prize in Physics in 1999, and organized several forums like *the International Student Science Forum*, *the Southeast Asian Student Leaders*, etc. to create a bridge for cultural and academic exchanges.

Entering the year 2018

VNU-HCM's operational plan for 2018 is based on an analysis of the implementation of the first phase of the strategic plan 2016-2020. In the development strategy of its new period, VNU-HCM continues its mission of conducting important scientific researches, being a leader in innovation, and making important contributions to the country's development and social progress.

In this flow, VNU-HCM identifies the theme of 2018 to be "Science and technology to enhance integration."

This theme is to establish the leading position of VNU-HCM in Vietnam's higher education system, and step by step approach the international higher education. At the same time, it is a commitment of VNU-HCM to continuously improve its quality, effectively manage and operate its strategic plan.

With this theme, VNU-HCM will carry out key activities in the field of science and technology, focusing on the following basic contents:

First, to implement the cooperation with the Ministry of Science and Technology, especially the research contents in the basic development programs approved by Vietnam's Prime Minister.

Second, to implement the project of enhancing the international research publication at VNU-HCM.

Third, to buildstrong and interdisciplinary research teams in connection to the core science laboratories at the national and VNU-HCM levels.

Fourth, to conduct deep research on the issue of innovations, developappropriate and validated scientific research tasks, and evaluate the applicability of researches.

Fifth, to effectively implement the pilot project on Centers of Excellence.

Looking forward to the future with an aspiration to become an international university, VNU-HCM has always operated positively, integrated actively, and gradually established the position and prestige of Vietnam's higher education on the approach to the advanced higher educationin the region and the world.

Upon the arrival of a new year, I would like to wish all the VNU-HCM lecturers, officials and students a year full of health, peace and prosperity.

OVERVIEW

VNU-HCM'S BOARD OF REGENTS

President: Assoc. Prof. Dr. Huynh Thanh Đat

Members: **Dr. Nguyen Hoang Tu Anh** *(from 3/2017)*; **Assoc. Prof. Dr. Phan Thanh Binh; Assoc. Prof. Dr. Nguyen Tien Dung; Mr. Tran Ba Duong; Assoc. Prof. Dr. Duong Anh Đuc** *(as at 3/2017)*; **Mr. Tran Thanh Liem; MSc. Ong Thi Ngoc Linh; Dr. Nguyen Đuc Nghia** *(as at 9/2017)*; **Assoc. Prof. Dr. Nguyen Hoi Nghia; Dr. Tran Viet Thanh; Prof. Dr. Vu Đinh Thanh; MSc. Lam Tuong Thoai; Prof. Dr. Tran Linh Thuoc; Assoc. Prof. Dr. Ho Thanh Phong; Mr. Nguyen Thanh Phong; Prof. Dr. Nguyen Van Phuoc; Assoc. Prof. Dr. Nguyen Tan Phat; Assoc. Prof. Dr. Nguyen Tan Phat; Prof. Dr. Tran Hong Quan; Assoc. Prof. Dr. Vu Hai Quan** *(as at 10/2017)*; **Assoc. Prof. Dr. Vo Van Sen**

BOARD OF PRESIDENTS

1

2

3

4

5

1. **Assoc. Prof. Dr. Huynh Thanh Đat**
   President
2. **Dr. Nguyen Đuc Nghia**
   Vice President (as at 9/2017)
3. **Assoc. Prof. Dr. Nguyen Hoi Nghia**
   Vice President
4. **Assoc. Prof. Dr. Duong Anh Đuc**
   Vice President (as at 7/2017)
5. **Assoc. Prof. Dr. Vu Hai Quan**
   Vice President (from 9/2017)

GOVERNORS OF MEMBER UNIVERSITIES & INSTITUTE

Prof. Dr. Vu Đinh Thanh,
Rector of VNU-HCM University of Technology

Prof. Dr. Tran Linh Thuoc,
Rector of VNU-HCM University of Science

Assoc. Prof. Dr. Vo Van Sen,
Rector of VNU-HCM University of Social Sciences and Humanities

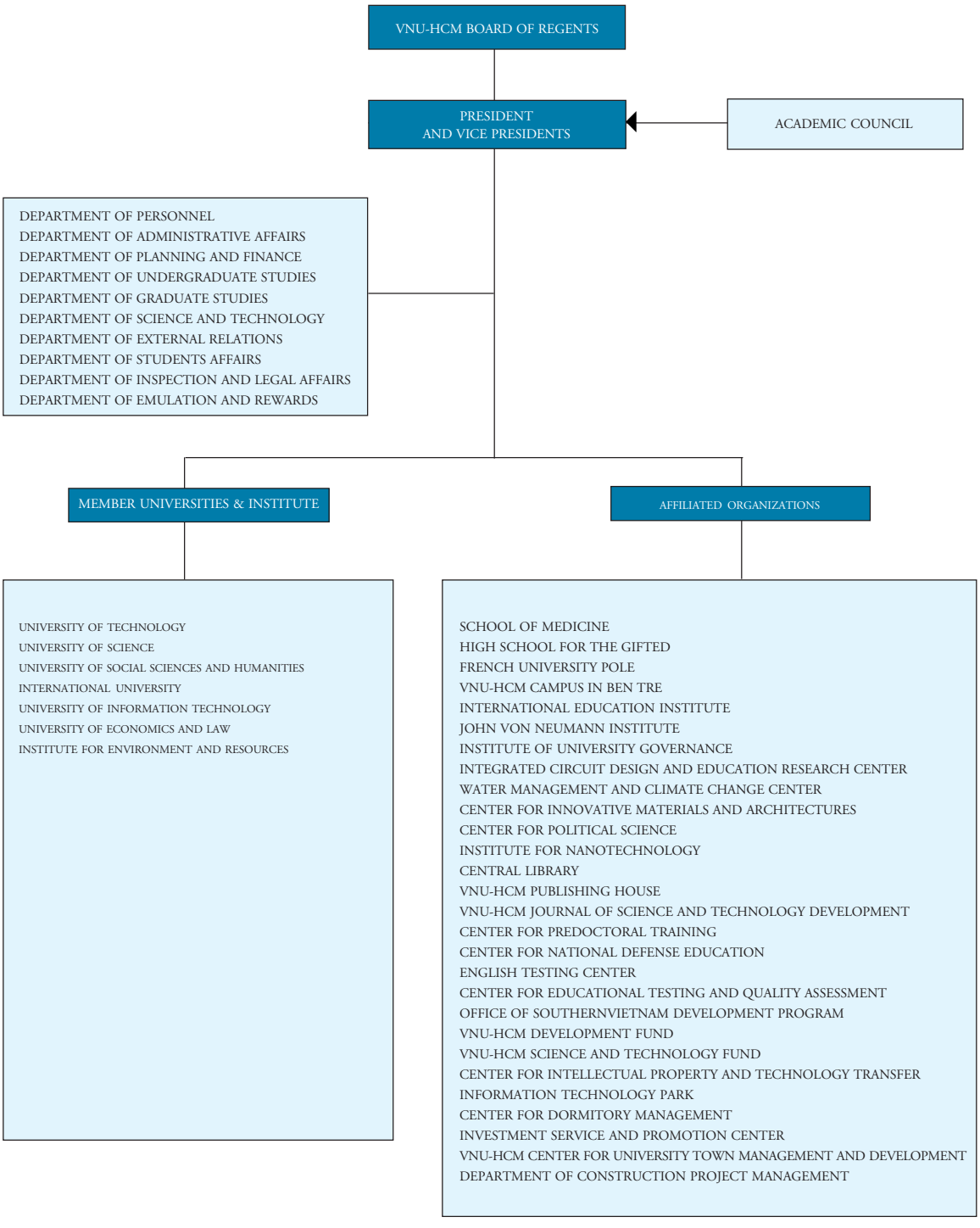
Assoc. Prof. Dr. Ho Thanh Phong,
Rector of VNU-HCM International University

Dr. Nguyen Hoang Tu Anh,
Rector of VNU-HCM University of Information Technology

Assoc. Prof. Dr. Nguyen Tien Dung,
Rector of VNU-HCM University of Economics and Law

Prof. Dr. Nguyen Van Phuoc,
Director of VNU-HCM Institute for Environment and Resources

VNU-HCM
Structure of Organization



01

Refining the leadership at the levels of VNU-HCM and affiliated and member universities and organizations

- At the level of VNU-HCM: The Prime Minister appointed the Chairman of the Board of Regents, Presidents and Vice Presidents of VNU-HCM.

- At the level of affiliated and member universities and organizations: The appointment was made for the Rector and Vice Rector of VNU-HCM University of Information Technology, the Director and two Vice Directors of VNU-HCM Center in Ben Tre Province, the Head of the Office of Southern Vietnam Development Office, the Chair and two Vice Chairs of the Management Board of VNU-HCM Development Foundation, and the Director of VNU-HCM John von Neumann Institute.

02

VNU-HCM's establishment of the Campus in Ben Tre province

03

VNU-HCM University of Technology's achievement of international quality standards

- The university achieved the university-level quality assurance certified by the European standards (HCÉRES), the university-level quality assurance certified by the AUN-QA standards.

- With 25 international quality certifications, the university has been is the leader of international quality assurance in Vietnam.

04

Events of commemoration and receiving the medal of honor

- The University of Technology celebrated the 60th anniversary of establishment, and was awarded the First Class Labor Medal.

- The University of Social Sciences and Humanities celebrated the 60th anniversary of development and integration.

- The University of Science celebrated the 60th anniversary of establishment.

05

VNU-HCM's scientists, lecturers, and experts' achievement of rewards and honors

- Prof. Dr. Nguyen Kim Phi was granted the Sofja **Kovalevskaja Award**in 2016.

- Dr. Nguyen Thi Hiep won the First rank of the ASEAN-US Science Prize for Women.

- Prof. Dr. Phan Thanh Son Nam won the Ta Quang Buu Award.

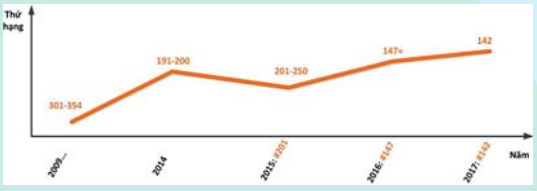
- Assoc. Prof. Dr. Le Thi Kim Phung was voted as the only Vietnamese scientist in the top 100 scientists in Asia by the Asian Scientist Journal.

- Assoc. Prof. Nguyen Ngoc Đien was honored to be the first Vietnamese member in the French Academy of Overseas Studies.

- Assoc. Dr. Le Quang Minh, Director of Training Center for Advanced Management (TCAM) was honored to be the first Vietnamese member of the AUN-QA Council.

06

VNU-HCM was 5 ranks higher in the QS University Rankings, becoming the leading university in Vietnam and one in the top 100 in Asian in the two criteria namely academic reputation and employer reputation.



07

Prof. Dr. Nguyen Thien Nhan, Secretary of Ho Chi Minh City Party Committee, beat the drum in the ceremony of the new academic year and delivered the message "Students and Startups".

08

VNU-HCM enhanced its image in the Asian and international higher education system: It hosted the 6th Southeast Asian Student LeaderForum and the 2nd Southeast Asian Student Affair Network Meeting in 2017.

09

The Youth Union of the affiliated and member universities received the Labor Medal, and the 20th Anniversary of VNU-HCM Youth Union's establishment

- 20 years of VNU-HCM's Youth Union: Being an effective model, and training typical cadres.

- The Youth Union of VNU-HCM University of Science received the Second-Class Labor Medal.

- The Youth Union of VNU-HCM University of Technology received the Second-Class Labor Medal.

- The Youth Union of VNU-HCM University of Economics and Law received the Third-Class Labor Medal.

10

VNU-HCM's students' high achievements and awards

- 10 students of VNU-HCM received the title "Students with 5 Good Merits" at the central level.

- The students of VNU-HCM University of Information Technology won the Championship in "the 2017 Studentsand Information Security Contest".

- Students of VNU-HCM University of Science won the Championship in "the 2017 ACM-ICPC Asian Student Programming Contest".

- Students of VNU-HCM University of Science won high awards in the National Olympic Contest on Marxist-Leninist Philosophy and Ho Chi Minh's Though tin 2017.

01

Some of the VNU-HCM member universities achieved quality assurance in line with Vietnam's MOET set of university quality assurance standards: the International University, University of Social Sciences and Humanities, University of Science, University of Information Technology, and University of Economics and Law.

02

VNU-HCM approved the strategic system of the affiliated and member universities and organizations.

03

Quality assurance activities:

- VNU-HCM continued to promote the quality assurance activities at the program level in line with the AUN-QA standards for the member universities: the International University, University of Technology, University of Social Sciences and Humanities, and University of Science.

- VNU-HCM was the nation's first university to issue regulations on quality assurance.

- VNU-HCM implemented the projects: "Developing and organizing the competency assessment for college and university at VNU-HCM", "Enhancing the position of VNU-HCM in the QS Asia University rankings".

04

VNU-HCM welcomed the Central delegations: the delegation of the National Assembly Committee for Culture, Education, Youth, Adolescents and Children, and the delegation of the Bureau of Teachers and Education Staff Management from the MOET.

- VNU-HCM implemented a series of activities in respond to Vietnam's Law Day".

05

VNU-HCM expanded its cooperation with ministries, sectors and localities: Signing a cooperation agreement with the Ministry of Science and Technology; Signing cooperation agreements with Binh Duong province and Ninh Thuan province; Signing a cooperation agreement with Saigon Liberty Newspaper, Mobifone Service Company Region 2, and Vietnam Chamber of Commerce and Industry (VCCI).

06

VNU-HCM expanded its cooperation with some universities in the world.

- Beijing Jiaotong University
- Shinshu University, Japan
- Auckland University of Technology, New Zealand
- National University of Baku
- Taiwan's National School System
- University of Arizona, USA
- University of California, Los Angeles

07

VNU-HCM strengthened its community service activities, cooperated with the localities in four regions namely the South Central Coast, the Central Highlands, the Southern, and the Southeast so as to train high-quality human resources, and conduct scientific researches and technology transfer, contributing to promotion of the local economy and society.

08

Professional activities in undergraduate and postgraduate education

- VNU-HCM made a review of its CDIO work in the period 2010-2017; coordinated with the MOET to hold a conference on education and training development in the Central Highlands; and organized the Conference to review and orient the implementation of the honor training program at the undergraduate level.

- VNU-HCM organized the Meeting on Postgraduate Work transfer, the Postgraduate Training Workshop for the human resource development in the Southern Region.

- VNU-HCM opened new training majors to meet the social needs: Logistics and Supply Chain, English Language, and Environmental Engineering.

09

VNU-HCM's studentshad exchanges with international scientists: An exchange with Professor Nobel Physics Gerard't Hooft and Professor Drew Gilpin Faust - President of Harvard University.

10

VNU-HCM has been shaped some programs and policies to promote startups and innovations in Ho Chi Minh City: Establishment of the Ecosystem for Startup in the Information Technology Park (ITP); Foundation of VNU-HCM Startup; and organization of seminars and exchanges on startups.

THE STRENGTH OF THE VNU-HCM SYSTEM

INTEGRATION OF EDUCATION QUALITY AT VNU-HCM

THE FACT THAT THE GLOBALIZATION AND INTERNATIONAL INTEGRATION HAVE BEEN DEEPER AND WIDER; AND THE INFORMATION TECHNOLOGY AND THE INTELLECTUAL SOCIETY HAVE BEEN RAPIDLY DEVELOPED ARE STRONGLY INFLUENTIAL FACTORS FOR VNU-HCM'S TRAINING ACTIVITIES. AS A RESULT, "THE QUALITY INTEGRATION" IS AN OBVIOUS TREND.

Integration process

The quality integration at VNU-HCM was shown systematically and synchronously from the inputs and training programs to the outputs. In details:

Strict and diverse inputs

During the past years, the enrollment process was always been implemented strictly and properly in line with the MEET's regulations.

At the same time, VNU-HCM promoted the autonomy of a large university with the role of a center for high quality training, scientific research, multi-disciplinary technology and multi-sectors.

VNU-HCM offered a variety of enrollment methods, including the recruitment based on the results of the national high school examinations, the direct admission, the priority admission for students from talented schools, the recruitment based on students' living regions,

and the recruitment based on the results of the competence tests...

In general, the selection methods were implemented systematically and achieved significant goals in terms of the recruitment scale as well as the input qualification. Particularly, the recruitment based on the results of the competence tests held by VNU-HCM International University initially attracted candidates and created positive effects in the enrollment process in 2017.

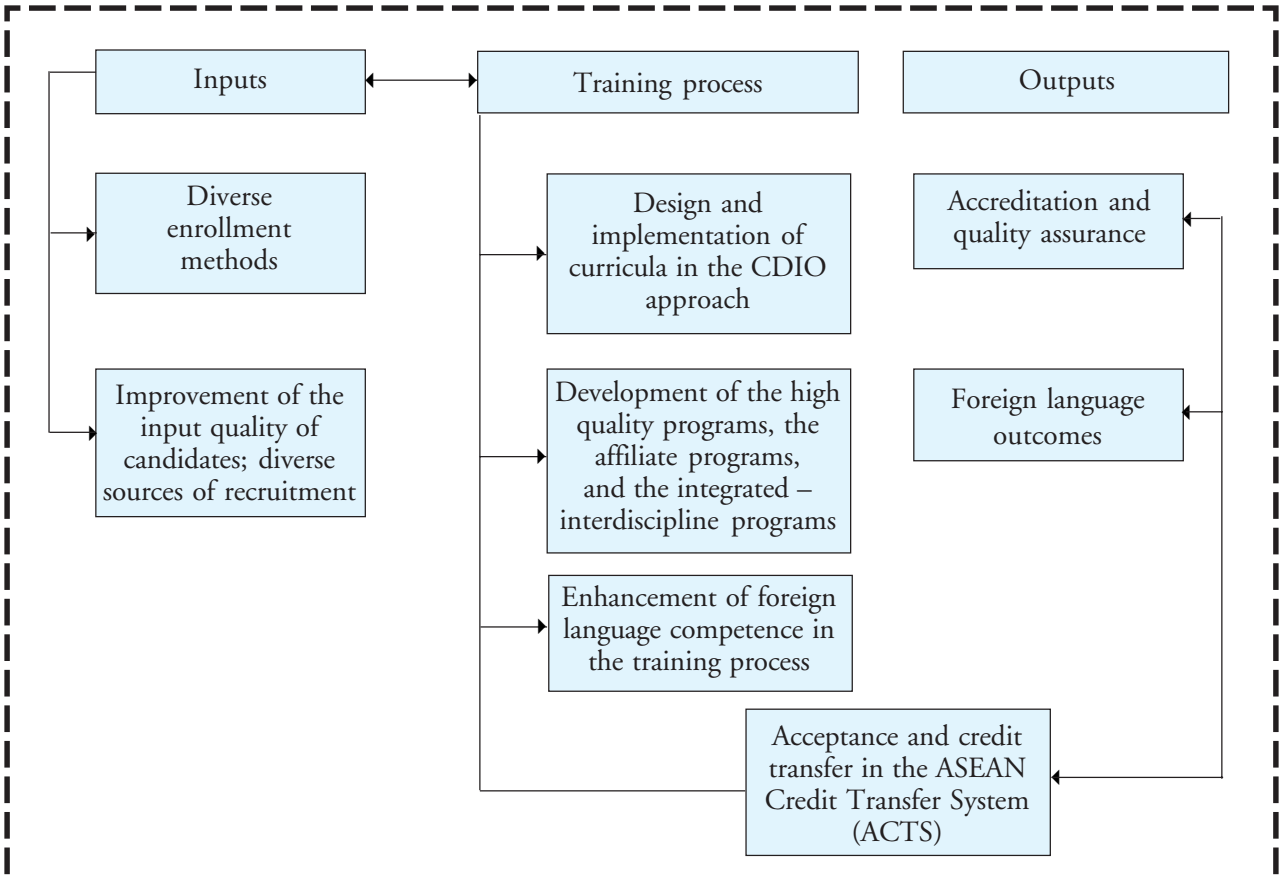
Thanks to the effective enrollment, the input quality has been growing steadily and distributed uniformly in all the member universities of VNU-HCM, and appropriate for each training program/ group. In details, VNU-HCM's admission scores in 2017 was 6-8 points (equivalent to 2-3 points per subject) higher than the average national scores (15.5-16) for the combinations of traditional subjects namely A00, A01, B00, C00, D00. This shows the level of competition and the strict selection for candidates in the admission to the member universities of VNU-HCM.

Application of new technology in training

To deal with the urgent requirements of the renovation process, VNU-HCM made many practical and meaningful activities to improve the quality of university education, focusing on applying the CDIO model to build up its curriculain line with modernization and development.

In this approach, the curricula were structured from the context: Conceive (C) - Design (D) - Implement (I) - Operate (O) so that the students' learning needs, were clearly identified, then more motivation were created for students in their learning activities and professional practice.

Starting with five curricula at the two pilot universities applying the CDIO model in 2010, the total of VNU-HCM's member universities increased to 5 as at November 2017, including 30 faculties and 62 disciplines involved in the



CDIO implementation. Among them were 30 technical disciplines and 32 non-technical ones.

A lot of the results of the CDIO implementation at VNU-HCM have widely been shared in the CDIO Association in the world and in the region, and delivered to training institutes in the country in form of scientific articles, workshops, seminars, and conferences; and five books about this application have been published.

Graduates of the CDIO-based programs have had more employment opportunities than those of former programs. Our biggest achievement is that the lecturers' competence has been strengthened so that they can provide the students with integrated learning experience, active learning, and outcome-based assessment. It helps enable lecturers to be more innovative in their teaching, improving their students' academic results.

Besides the application of modern teaching technology, VNU-HCM actively promoted the foreign language competence in training via the implementation of the Project of VNU-HCM Level Foreign languages from 2010. Its aim is to help learners consolidate their four language skills in general English. i.e. listening, speaking, reading and writing, as well as develop their professional English skills to meet the professional requirements.

At VNU-HCM, the use of English in teaching some specialized modules for regular classes has become familiar. It is a way to integrate the teaching of specialized courses into the teaching of English for specific purposes. It is a product from the member universities' bachelor programs namely talented engineer programs and advanced programs. Since 2014, VNU-HCM has implemented teaching 185 courses in the member universities' programs of 79 disciplines using the English language.

In VNU-HCM's development strategy in the period 2016-2020, the construction of curricula has been considered one of the break throughs to step by step to efficiently improve the quality of training and research. The curriculum construction is co-ordinated by VNU-HCM and its member universities so as to provide the most up-to-date information, knowledge and skills for learners, including self-compiled textbooks, foreign textbooks and digital archives.

Development of high quality and affiliate programs

The high quality training programs at VNU-HCM aim to meet the training quality in line with the social needs (including the talented bachelor program, the advanced program, the high quality fee-based program, and the high quality engineer training program - PFIEV). The high quality programs were implemented from 2013 to 2017. Currently, VNU-HCM has implemented 75 high quality programs, making up about 65% of the disciplines, and the training scale has been over 7,000 students, making up about 12% of the total number of VNU-HCM students. These programs have been updated and integrated with those from

University	Group A (since 2010)	Group B (since 2013)	Group C (since 2014)	Group D (since 2015)	Group E (since 2016)	CDIO-based programs/ total Applied
University of Technology	1 (T)	12 (2 NT)	20 (5 NT)	-	-	33/33 (100%)
University of Science	4 (4NT)	2 (1 NT)	-	10 (8 NT)	-	16/16 (100%)
University of Information Technology	-	2 (2 NT)	3 (2 NT)	-	2 (2 NT)	7/7 (100%)
University of Economics and Law	-	1 (1 NT)	-	1 (1 NT)	1 (1 NT)	3/10 (30%
University of Social Sciences & Humanities	-	-	-	2 (2NT)	1 (1 NT)	3/17 (18%)
Total	**5 (4 NT)**	**17 (6 NT)**	**23 (7 NT)**	**13 (11 NT)**	**4 (4 NT)**	**62/83 (75%)**
In total,	there are 62 programs: 30 technical &technological programs, 32 non-technical programs T: Technical; NT: Non-technical					

(Source: Proceedings of the CDIO project summative conference at VNU-HCM in the period 2010-2017)

Order	University	Number of ACTS-registered courses
1	International University	279
2	University of Technology	90
3	University of Science	25
4	University of Economics and Law	15
5	University of Information Technology	9
6	University of Social Sciences and Humanities	8
	VNU_HCM	**426**

(Source: ACTS Website - apps.acts.ui.ac.id)

advanced countries; and 20 of them have been taught completely in English (VNU-HCM University of Technology: 15 programs, VNU-HCM University of Science: 01 program, VNU-HCM University of Economics and Law: 03 programs, and VNU-HCM University of Information Technology: 01 program). The high quality programs have positively impacted the development of the student intakes and the higher education service quality, contributing to meet the high demand of learners and provide lecturers and learners with a better treatment mechanism… Therefore, these programs should be prioritized for expansion and would step by step occupy a high proportion in VNU-HCM's training scale. In addition, 65 affiliate programs at VNU-HCM have been implemented from the undergraduate to postgraduate levelsunder cooperationwith high quality partner universities whose rankings in the advanced countries are quite high.

Being asymptotic to outputs with international standards

The quality is always the top priority in the training implementation at VNU-HCM, including activities to improve English skills, meet the social needs, and approach international standards.Undergraduate, graduate and postgraduate students at VNU-HCM are required to achieve a certain level of English proficiency with four skills of listening, speaking, reading and writing in line with the national framework regulated by the Vietnamese Government.

During the past time, VNU-HCM obtained remarkable achievements in its quality assurance and accreditation. All the six member universities were accredited and granted quality certifications; five of them were accredited by the MOET. And VNU-HCM University of Technology achieved the quality assurance by the French's High Council for Evaluation of Research and Higher Education (HCÉRES) and was accredited by the ASEAN University Network Quality Assurance (AUN- QA).

In 2017, VNU-HCM rose to the 142nd in the QS ASIA rankings, and placed in the top 1.2% of the top universities in Asia. Compared with the rank of 2016, VNU-HCM was 5 ranks higher; and compared with that of 2013, it was 159 ranks higher.

In order to more easily promote student exchanges and academic exchanges among organizations and countries, the ASEAN University Network (AUN) decided to establish the ASEAN Credit Transfer System System (ACTS). Since 2016, the ACTS Project of VNU-HCM has been restarted with 420 courses in the academic year 2017-2018.

Up to now, the acceptance and credit transfer have brought remarkable changes, reflecting not only in the increasing number of international students and the increasing number of students in VNU-HCM's member universities who registered in these programs, but also in the high awareness of the stakeholders about the significance of the process of "integration of quality education" in order to gradually realize the vision "VNU-HCM aims to build up a university system in the top of Asia, a university for the convergence of Vietnam's science, technology, culture and knowledge".

INNOVATION AND ENHANCEMENT OF UNIVERSITY GOVERNANCE CAPACITY

In the context of integration and university autonomy, besides the major institutional and organizational issues, the need for innovation and enhancement of university governance whose focus is on strengthening the administrative staff becomes indispensable.

Building professional administrative staff well qualified for operating the system in the innovation period is the top priority of VNU-HCM. The greatest achievement in training and improving the VNU-HCM staff in the past few years has expressed the unification of approaches to university administrative issues in the whole system.

Although the majority of the administrators come from those who are in positions of teaching and research with high professional qualifications, enthusiasm and experience, they still need more knowledge and supportive tools for systemic administration to meet the requirements of international integration. Following the strategic orientation of the previous period, the project "Enhancement of university governance capacity" for the staff in the VNU-HCM Strategic Development Plan in the period 2016-2020 has been designed and implemented to reach the goals above.

In 2018, in addition to the upgrade of background knowledge of higher education system and essential skills such as foreign language and critical thinkingones, VNU-HCM is going to domestically and internationally run four intensive training courses in university governance for the strategic and tactical administrative cadres.

VNU-HCM Institute of University Governance, with a team of experienced collaborators from many prestigious universities and educational institutions in the region and in the world is going to make practical contributions to the successful implementation of this project.

VNU-HCM'S APPROVAL FOR THE STRATEGIC PLANS OF THE MEMBER UNIVERSITIES AND AFILIATED ORGANIZATIONS IN THE PERIOD 2016-2020

TO UNIFY THE WHOLE SYSTEM'S ORIENTATION, VNU-HCM IMPLEMENTED THE ASSESSMENT AND APPROVED THE STRATEGIC PLANS OF THE MEMBER UNIVERSITIES AND AFFILIATED ORGANIZATIONS THROUGH A PROCESS WITH ASSESSMENT COMMITTEES.

Based on the features and tasksof each member university and afilliated organiztion, VNU-HCM consists of two groups, namely the member organiztions (6 universities and 1 institute) and affiliated ones (academic service, scientific research - technology transfer, service exploitation, quality assurance and testing, training and scientific research service).

VNU-HCM conducts the evaluation procedure of the strategic plans of its member and affilated organizations with 13 specific criteria to ensure their visions, missions, objectives and contents in line with their own functions, tasks and strengths as well as the strategic plan of VNU-HCM. Accordingly, VNU-HCM approved the strategic plan of 7 member universities and 23 affilated organizations step by step in 2017.

Based on the approved strategic plans, VNU-HCM has its organizations deploy their plans in line with the annual operational planning system in the following steps: building, reviewing, implementing and evaluating. This is the basis for VNU-HCM to evaluate the implementation of the organizations' plans, allocate appropriate resources, and support them to operate efficiently in line with the planned orientations.

By 2020, the strategic planning management of VNU-HCM is supposed under implementation in the following process: In 2018, VNU-HCM conducts midterm evaluations on the strategic plans of the organizations in the second quarter; then adjusts VNU-HCM's strategic plan in line with the reality, and approves the revised one in the third and forth quarters. In the first quarter of 2019, VNU-HCM approves the strategic plans of the organizations; and then in the forth quarter of 2020 VNU-HCM reviews the implementation of the strategic plan and prepares orientations of the strategic plan in the next period.

A refresher course for its cadres organized by VNU-HCM
Photo by ***Department of Personnel***

A training course by VNU-HCM. Photo by ***Department of Personnel***

TRAINING AND UNGRADING VNU-HCM STAFF

Training, retraining and upgrading the staff are determined by the Party and the Government as key contents as well as important steps for the purpose of providing qualified and professional human resources to meet the short-term and long-term missions.

Therefore, VNU-HCM thoroughly grasps that the policy of training and retraining its cadres should ensure the essential knowledge, skills and attitudes to form generations of administraters who have an excellent vision and an edequate ability to work independently as well as implement assigned tasks effectively. Especially, they are required to have good knowledge of leadership and university governance to meet the requirements of VNU-HCM's development and integration.

On this basis, VNU-HCM's Training and Retraining Project for the period 2018-2020 has been designed to actively create future leaders and professional administraters who possess a strong political will, good virtue, good vision and practical experience, are ready to fulfill their assigned tasks, and contribute to the sustainable development of VNU-HCM. Simultaneously, the project is one of the tasks in the 2018 Strategic Plan and an important and practical part of VNU-HCM's overall action program. It aims to improve the efficiency of the systemic governance proposed in VNU-HCM's Strategic Plan for the period 2016-2020.

VNU-HCM has deployed the project via dispatching its cardes for further training and upgrading at reputable training institutions nationwide and worldwide. Accordingly, the project focuses on four areas: (1) Training on political knowledge, (2) Upgrade in government management knowledge and professional skills, (3) Upgrade in university governance capacity, and (4) Upgrade in foreign language competence.

The project is supposed to be implemented within 3 years for 100% of the cadres participating in 18 training courses in Vietnam and 4 training programs in foreign countries.

The project promises to make a significant change in the quality of VNU-HCM's leadership, administration and administrative environment. Therefrom, it greatly contributes to the enhancement of efficiency of the system governance, creating a foundation for VNU-HCM to develop rapidly and successfully as well as fulfill the mission given by the Party and the Government.

VNU-HCM'S FOSTERING ITS STAFF'S SOFT SKILLS

BEING AWARE OF THE IMPORTANCE OF IMPROVING THE STAFF'S QUALITY AND EFFECTIVE NESS, VNU-HCM CONDUCTED TRAINING COURSES ON IMPROVING ITS CADRES' PROFESSIONAL AND OTHER ESSENTIAL SKILLS TO MEET THE INCREASING WORKING REQUIREMENTS IN THE INDUSTRIAL REVOLUTION 4.0.

Communication course. Photo by ***Duc Loc***

The participants discussing in groups. Photo by ***Duc Loc***

Text editing course. Photo by ***Minh Chau***

The training courses on communication, presentation and text editing skills were organized at VNU-HCM and instructed by PACE Business School experts. These courses provided a lot of practical knowledge and skills to help the staff work professionally and effectively. When joining these courses, VNU-HCM cadres could have the opportunity to exchange and share experience as well as connect with each other.

Ms. Hoang Thi Hanh – a VNU-HCM staff said "After taking part in the communication course, I have gained more confidence and known how to listen to and share things. Especially, the course has helped me recognize different groups of personalities from which I can understand and know how to behave more appropriately".

Ms. Le Thi Thu Yen – a VNU-HCM staff also remarked "The presentation course is really amazing. I'm not afraid of presentation any more. I am very grateful for VNU-HCM's organizing such a meaningful course."

The Rectors of the USSH and the IU exchanged a memorandum of cooperation agreement between the two universities. Photo by ***Minh Chau***

The Rectors of the UEL and the UIT signed for cooperation. Photo by ***Phuong Linh***

STRENGTHENING THE TRAINING NET AT VNU-HCM

ON JUNE 12TH, THE INTERNATIONAL UNIVERSITY (IU) AND UNIVERSITY OF SOCIAL SCIENCES AND HUMANITIES (USSH) SIGNED A TRAINING COOPERATION AGREEMENT. ONE MONTH LATER, THE UNIVERSITY OF INFORMATION TECHNOLOGY (UIT) AND THE UNIVERSITY OF ECONOMICS AND LAW (UEL) REACHED THE SAME CONSENSUS ON TRAINING COURSES. THE TRAINING NET OF VNU-HCM MEMBER UNIVERSITIES SHOWS THE INTEGRITY OF SHARING RESOURCES AND THEIR OWN STRENGTHS.

The IU and USSH cooperated with each other in the Bachelor of English Program in 2017-2018. Particularly, the IU is going preside at editing the program and provide textbooks, reference materials and equipment for its faculty members. The USSH is going to coordinate teaching a couple of specialized subjects. At the same time, the two universities organize workshops, seminars, events and scientific research topics related to this field.

The UIT and UEL are going to cooperate training e-commerce and exchanging lecturers. Accordingly, they recognize equivalent courses in the curriculum and allow their students to study some courses in the other university. Nevertheless, the total of credits does not exceed 10% of a training program. In addition, the two universities set up a parallel project team, prepare for the 2018-2019 admission and transfer the available management technology. At the same time, both promote research cooperation in the field of e-commerce and jointly organize scientific seminars on related issues.

Associate Professor Ho Thanh Phong – Rector of the UI expected the cooperation among universities would provide learners with interesting, unique training programs of great quality.

Associate Professor Huynh Thanh Dat – President of VNU-HCM said that this would be a good start for cooperation and resource sharing among VNU-HCM's member universities. "This activity will create a new atmosphere in VNU-HCM, and I hope the universities will cooperate with each other not only in training but also in research," affirmed VNU-HCM President.

In the next phase, the IU and USSH continue to cooperate for further training in tourism, communication and education management and organize short courses and international cultural exchange programs to attract foreign students to VNU-HCM.

Assoc. Prof. Nguyen Hoi Nghia - Vice President of VNU-HCM and Mr. Kim Chul-su - Chairman of Pony Chung Scholarship are awarding scholarship to VNU-HCM students. Photo by ***Anh Vu***

Dr. Nguyen Duc Nghia, former Vice President of VNU-HCM is awarding Vallet scholarships to the students of the University of Technology. Photo by ***Ly Nguyen***

BUSINESS RESOURCES FOR HIGHER EDUCATION DEVELOPMENT

IN THE 2018 ACTION STRATEGY, VNU-HCM HAS MENTIONED THE MOBILIZATION OF BUSINESS RESOURCES FOR HIGHER EDUCATION DEVELOPMENT. UP TO NOW, VNU-HCM HAS BUILT A NETWORK WITH MORE THAN 30 ENTERPRISES AND GROUPS, MOBILIZED SPONSOR IN 20 PROVINCES AND CITIES IN VIETNAM AS WELL AS LINKED WITH MABUCHI FOUNDATION, AND VIETNAMESE BUSINESS ASSOCIATION (IN THE US).

A lot of construction works, and facilities, research and student activities, etc. have been done thanks to the support from these resources.

Diversified funding approaches

The "programmatic financial" method is chosen by many enterprises with the aim of funding for VNU-HCM. Accordingly, grants and contributions have been provided over many years. Typically, VietinBank and Military Insurance Joint Stock Company (MIC) have sponsored for 5 years, 150 VND million VND and 50 VND million per year respectively. Also, HPT Technology Informatics Services Joint Stock Company has sponsored for 5 years, 50 million VND per year; and Kinh Do

Confectionery Joint Stock Company has sponsored for 2 years, 50 million VND per year...

In addition to the direct financial resources in cash, VNU-HCM mobilized financial resources in form of facilities for educational development such as the Functional Examination Lab at VNU-HCM School of Medicine, the Lotus Reading room, VNU-HCM Traditional Gallery, and especially, the dormitory sponsored more than 60 VND billion for its interior decoration.

Besides, VNU-HCM actively called for scholarships. Traditional scholarship programs such as Ordon Vallet, Toshiba, Pony Chung, Petrovietnam, Mobifone, etc. have obtained many achievements so far.

Le Van Hanh, a 3rd year student of the Faculty of Computer Science who won the MobiFone scholarship in 2016, said: "With the scholarship, I could afford my tuition fee for a year and enrolled in English courses. And now my English has been better and better. Thanks to this stepping stone, I managed to do a part-time job to earn some money to cover my daily life and study expenses".

In addition to the business resources, the alumni's annual scholarship program for VNU-HCM students has gradually formed. Up to now, more than 100 collectives, organizations and individuals have become regular sponsors for educational activities at VNU-HCM.

The lab for Functional Exploration at the School of Medicine, VNU-HCM - A project worth of VND 10 billion deployed from the VNU-HCM Development Fund and Vietcombank. Photo by ***Thai Viet***

Improving the quality of education

Through VNU-F, about 5 billion dong from business resources has been funded to support some organizations such as the JVN Center for Excellence (now John Von Neumann Institute), the Research and Development Project for new products with ICDREC, and the MANAR Center (now INOMAR Center) for its cooperation with the University of California, Berkeley, USA.

Besides the scholarships from enterprises, VNU-HCM development fund has provided more study promotion scholarships such as Scholarships for Excellent students, Scholarships for Top students, Scholarships for Disadvantaged students, Scholarships for Community work, and Scholarships for Lao students.

Academic activities and student life have also been improved. For example, HSBC's Financial and Career Management Program for students was funded nearly 500 million dong; "The friendly meal" program sponsored by Hoa Sen Group was funded over 500 million dong, etc.

In case of Mobifone, VNU-HCM and Mobifone have signed a cooperation agreement since 2014. It is to sponsor students' and lecturers' activities. Accordingly, Mobifone sponsors 1.2 billion dong each year during 5 continuing years, including 1 billion dong funded for the activities, and 200 million dong for VNU-HCM students' scholarships.

Mr. Tran Tuan Phuong, VNU-HCM Former Deputy Secretary of the Youth Association remarked: "Since Mobifone's financial support, the efficiency of student activities has significantly improved. There has been more investment in the quality of programs, theatres, sound and light systems, and then more students have excitedly joined the activities."

The sponsors also facilitate VNU-HCM students to have their internships in big corporations such as Saigon Hi-Tech Park, Coca-Cola Beverages Vietnam Limited, Unilever Vietnam, etc.

VNU-HCM's efforts to connect and positive feedback from society have helped it to effectively utilize the funding resources to improve the quality of comprehensive education.

The panorama of Building B, VNU-HCM dormitory. Photo by ***Dinh Kien Cuong***

VNU-HCM: UNIVERSITY AUTONOMY

IN THE CURRENT CONTEXT OF EDUCATIONAL INNOVATION, VNU-HCM GRADUALLY IMPLEMENTS AN AUTONOMY-BASED DEVELOPMENT MODEL ON THE BASIS OF DEVELOPING ITS UNITY AND INTER-DISCIPLINARY TO PROMOTE THE STRENGTHS OF THE LEADING UNIVERSITY SYSTEM IN VIETNAM.

Accordingly, VNU-HCM is going to play five crucial roles, including (1) orientating and facilitating policies for its member universities and affiliated organizations to promote their possibilities; (2) taking the advantage of being a major university system prioritized by the Government so as to intensify deep investment activities and invest in fundamental construction; (3) assisting the member universities and affiliated organizations to ensure compliance with regulations, enhance autonomy and academic freedom, and increase accountability; (4) connecting, sharing and exploiting the system resources to achieve significant breakthroughs; (5) leveraging the system strengths to increase the brand strength, enhance the competitiveness with other universities in the region and the world.

VNU-HCM is going to form three groups of autonomous organizations. Group 1, including the International University, implements the autonomy mechanism with recurrent and investment expenditures. Group 2, including the International University, University of Economics and Law, University of Information Technology, University of Technology, and School of Medicine, assures 100% of recurrent expenditures. Group 3, including the USSH and the US, mainly implements the autonomy mechanism with regular expenditures, i.e. self-reliance towards training sectors with the ability of financial independences; and the Government ensures their operational costs in the form of order (special assignment) in the direction of fundamental science training sectors necessary for the national development.

Based on these groups, the university autonomy pathway at VNU-HCM is going to be implemented in two phases. In the first phase, in 2018, VNU-HCM conduct pilot autonomy for the IU, UEL, UIT and UT. These universities have already had preparations and conditions for implementation. In the second phase, by 2020, based on the evaluation of the effectiveness of pilot projects, VNU-HCM is going to review the university autonomy pathway of the US, USSH, School of Medicine, and VNU-HCM Campus in Ben Tre province by 2020.

Once the member universities implement their autonomy, it is essential for VNU-HCM to thoroughly address some issues of finance, systematization and competitiveness… among them. For example, what are changes in relations between VNU-HCM and the member universities in the environment of university autonomy? What are policies to help the member universities manage their finance for operation and ensure the quality of training and scientific research at the same time; how are disadvantaged students supported when the tuition fee is adjusted upward and close to the actual training cost, etc.

DIVERSIFYING MODELS OF ADMISSION IN LINE WITH INTERNATIONAL STANDARDS

Candidates attending the Competency Assessment Test at the International University in 2017. Photo by ***Minh Chau***

WITH THE AIM AT INNOVATING THE ADMISSION METHODS IN THE INTERNATIONAL APPROACH, VNU-HCM HAS CONDUCTED THE PROJECT "CONSTRUCTING AND ORGANIZING THE COMPETENCY ASSESSMENT TEST FOR UNDERGRADUATE ADMISSION AT VNU-HCM"

Structure of the competency assessment test

Unlike the National High School exam, the qualification exam focuses on assessing the candidate's basic ability to study at university: language use, critical thinking, analysis, problem solving. These abilities are assessed through a 100-question multiple-choice quiz in 150 minutes.

The content of the test is fully integrated in knowledge and thinking ability in the form of qualitative and quantitative data as well as basic formulas. Therefore, the test will evaluate the ability to reason and solve problems rather than assessing the ability to memorize of the candidates.

Assessed section		Question quantity	Testing content
Section 1: Competence of Language use	A. Multiple choice in Vietnamese	20	- Word use, reading comprehension and reading analysis
	B. Multiple choice in English	20	- Reading comprehension in English
Section 2: Skill of Logical thinking	C. Multiple choice in the skill of logical thinking	20	- Logical thinking, and identification of rules
Section 3: Skill of Problem solving	D. Multiple choice in the skill of data analysis	20	- Analysis of meanings, identification of trends and rules based on given data in forms of tables and figures
	E. Multiple choice in the skill of problem solving	20	- Problems presented in readings on natural sciences, social sciences, economics, technology etc. Candidates use the information in readings to answer questions about these problems

VNU-HCM's test is based on the US Scholastic Assessment Test (SAT) and the British Thinking Skills Assessment (TSA). These are standardized tests for admission into university. In structure, VNU-HCM's test of ability integrates reading comprehension, analysis of the SAT and critical thinking, solving problem skills of the TSA test.

Candidates' high support

Over the past two years, VNU-HCM has focused on building a large and high quality exam bank with the participation of experts from VNU-HCM's member units, Ho Chi Minh City Department of Education and Training and high schools. All questions were evaluated for validity, reliability and distinguishability across multiple rounds of reflection and were tested on high school students inside and outside of Ho Chi Minh City. Test results showed that the new form of assessment is highly supported. In particular, candidates are interested in the logical thinking and problem-solving skills sections.

Each member unit of VNU-HCM will, depending on the conditions of its unit, determine the scope (branch, program) and admission criteria by each method. In some specific sectors / programs such as medicine and pharmacy; advanced training programs, high quality programs, the units can add other evaluation criteria to take the most suitable candidates.

The test is not only done in VNU-HCM to improve the quality of enrollment, but also extends to universities in Vietnam. The exam does not only select qualified candidates for universities, but also help high school students better orientation in the process of learning and capacity development. Thereby, creating a solid foundation for students to effectively participate in the high-quality labor market of the country.

Successfully organizing the qualification test will further strengthen the role of VNU-HCM in community service as well as the responsibility of leading the system of universities in the South.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The University of Technology ACHIEVEMENT OF TWO INTERNATIONAL STANDARDS

ONE OF THE TWO HIGHLIGHTS ON THE ACTIVITY OF INSPECTING AND ASSURING THE EDUCATION QUALITY IN VNU-HCM IN 2017 IS THE UNIVERSITY OF TECHNOLOGY, VNU-HCM ACHIEVING TWO INTERNATIONAL STANDARDS OF HCÉRES AND AUN-QA.

Prof. Dr. Vu Dinh Thanh (left) is receiving the HCERES accreditation certificate. Photo by ***UT***

Accordingly, the University of Technology is one of four universities in the technical field of Vietnam to meet European quality standards, being the first school in the country and the third school in the ASEAN region to achieve AUN-QA standards.

Two golden yardsticks of international quality assurance

HCÉRES is an independent administrative body established in 2013 with the function of evaluating institutions of higher education, scientific research organizations, collaborative research organizations and the French National Center for Scientific Research. The agency also participates in evaluating and testing foreign or French training institutions abroad.

HCÉRES develops two sets of standards to evaluate two targets, the training program and the training institution. Both sets of standards set forth the criteria required by the European Association for Quality Assurance (ENQA) and were recognized by ENQA as member of the association.

Specifically, the standard set for evaluation of HCÉRES consists of 6 areas, 17 criterions, 29 sub-criterions. Among them, there are criteria directly related to learners such as learning environment and training management, training and research policies to meet learner's needs, quality assurance policies and ethics in training...

The results of quality assurance following this set of standards are evaluated in three levels: standardized and recognized for 5 years, standardized but not recognized and not recognized standard. Thus, the University of Technology has reached the highest level.

Meanwhile, AUN-QA's set of standards for educational institutions consist of 25 criterions, 111 sub-criterions, divided into four categories: (1) Strategic Quality Assurance, (2) Systemic Quality Assurance, (3) Functional Quality Assurance and (4) Performance.

According to the AUN-QA conclusion, the University of Technology has fully met the AUN-QA requirements for quality assurance in a university.

Dual benefit from international quality assurance

Achieving many international quality assurance standards, the University of Technology will bring benefits not only to learners but also to businesses and society.

First and foremost, students are given better and better education because the school will have to keep improving their curriculum, facilities and professors to maintain their quality assurance.

Secondly, the schools of the same quality assurance system will recognize degrees and credits from each other, thereby increasing opportunities for educational cooperation with foreign universities, attracting international students to study and moving towards internationalize training programs.

Based on this, enterprises will be provided with a quality source of candidates from the training programs accredited internationally; The society will improve through accumulated values from learners, schools and enterprises.

In particular, the activities of the University of Technology include the design and review of training programs, management of scientific research, collaborations and partnerships in scientific research, connection and community service. They are assessed as "better than expected" compared to many AUN-QA criteria. Prof. Dr. Vu Dinh Thanh - Rector of University of Technology claimed: "These standards which hold core quality for a university are very important the core quality for a university."

Not the final destination

With this achievement, the University of Technology has gained a solid and equal position to universities around the world, especially in the field of training, scientific research and external relations. However, Prof. Dr. Vu Dinh Thanh asserted that quality assurance is not the ending point of the quality assurance process but it is the starting point for a closed, constantly developing process to ensure quality and commit to achieving the goals set by the school.

"The goal of the University of Technology is not the self-satisfaction with the achievements. Its goal is a comprehensive, long-term strategy for the school's commitment to society and to each cadre and students through specific activities such as constantly reviewing and improving the quality of the system's operation in the training procedure, scientific research activities and administrative organizations; Developing financial autonomy and autonomy of the school; International integration, through a number of cooperation programs on training, research," the Rector emphasized.

UT students at the 60 year anniversary of its establishment. Photo by ***UT***

Prof. Dr. Vu Dinh Thanh informed that based on the comments and suggestions of the quality assurance organizations, the school would implement continuous quality improvement plans to join the school-level of reliable ranking system in the region and the world.

VNU-HCM's AIMS TOWARDS THE TOP 100 UNIVERSITIES IN ASIA

THE UNIVERSITY RANKINGS HAVE BEEN BECOMING A GLOBAL TREND FOR ATTRACTING THE ATTENTION OF PEOPLE AROUND THE WORLD.

Active participation in the international rankings

Of nearly 60 international, regional and national ranking systems, QS Asia is considered the one that reflects the mission of a university when its criteria and rating scale could evaluate the level of satisfaction of the stakeholders with regard to the training, research and community service of the school.

From 2009 to 2016, despite not providing official data for international ranking institutions, VNU-HCM has made their debut on the QS Asia rankings. However, due to limited availability of data as well as restrictions on active participation in the ranking, VNU-HCM occupied only a modest position in the rankings. Not until 2016, VNU-HCM was finally included in the top 150 universities in Asia. Due to lack of information, some criteria weren't scored on the 100-scale.

In 2017, with the orientation of "actively participating in ranking international universities", VNU-HCM has initially developed and implemented a data collecting and data provisioning system for the QS. This activity has brought positive signs when VNU-HCM has increased 5 steps in 2017, the "0 points" criteria in previous years has improved significantly. Especially, VNU-HCM has affirmed its leading position in the country and also in the top 100 in Asia, in terms of two important criteria: academic reputation and reputation for employers.

However, the results from analyzing and benchmarking criteria in the rankings show that VNU-HCM still has many criteria that are significantly lower than average in the region. Therefore, in order to reach the target of "towards the top 100 in Asia", VNU-HCM will need to make great efforts in the future. In the context of scarce resources, the rating enhancement plan should be implemented with clear orientation, selective and feasible objectives, effective connection with activities in the overall strategic planning of the whole VNU-HCM system.

Constant improvement of the rankings

The project "Improving the position of VNU-HCM in Asia through the university ranking of QS Asiain the period 2017-2020" is considered one of the projects demonstrating the determination of VNU-HCM in order to realize the goal till the period 2020-2025, i.e. VNU-HCM becomes one of the top 100 universities in Asia.

The project focuses on activities that have a strong impact on improving its position in the QS Asia rankings, especially those with high value.

In the period 2017-2020, the project will prioritize the conduct of three main groups of solutions, including:

Promote engagement with business and its academic partners. This solution directly affects criterion 1 and 2, accounting for 50% of the QS Asia rankings. The results of recent years show that the academic reputation of VNU-HCM is good, while the prestige of the employers is average. The activities of this solution aim to maintain and promote scores on the academic reputation of VNU-HCM and at the same time promote the relationship with enterprises and employers.

Supporting and benchmarking. This is an important and fundamental solution that helps to identify suitable strategies, tactics and to implement activities in a unified and synchronized custom throughout the VNU-HCM system. This solution is implemented based on the following specific activities: Raising awareness of international university ranking; Researching and benchmarking among university rankings; Building software system to support the management, data collection and processing of VNU-HCM.

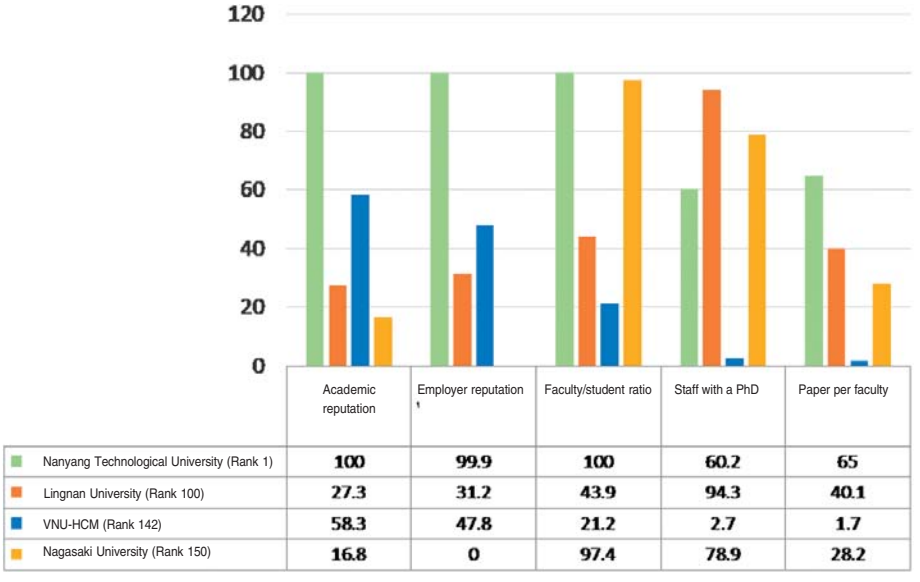
Connect the systems, improve the overall quality. This long-term solution plays as a bridge that links the projects being implemented under the strategic plan of VNU-HCM 2016-2020. Within the framework of the project, solutions will focus on reviewing, evaluating and analyzing the current status of activities related to international integration capacity (degree of internationalization), capacity of scientific research, team size, teacher ratio, ... of VNU-HCM. Accordingly, relevant procedures, regulations and policies will be developed and promulgated to improve the effectiveness of these activities in the next phase.

Table 1: *The criteria in the QS Asia Rankings*

Order	Criterion	Rate (%)
1	Academic reputation	30
2	Employer reputation	20
3	Faculty/student ratio	15
4	Staff with a PhD	5
5	Paper per faculty	10
6	Citations per international paper	10
7	Proportion of international faculty	2,5
8	proportion of international students	2,5
9	Proportion of inbound exchange students	2,5
10	proportion of outbound exchange students	2,5

Table 2: *The benchmark of VNU-HCM's results and the Asian average ones*

Criterion	VNU-HCM	Average rate
Faculty/100 students	9.3	8.0
Staff with a PhD/100	23.0	64.0
International students/100 students	2.2	5.8
International faculty/100 lecturers	2.2	8.9
Proportion of inbound exchange students/100 students	2.2	2.0
Proportion of outbound exchange students/100 students	0.3	2.3
Paper per faculty	0.1	5.2
Citations per paper	4.4	4.2



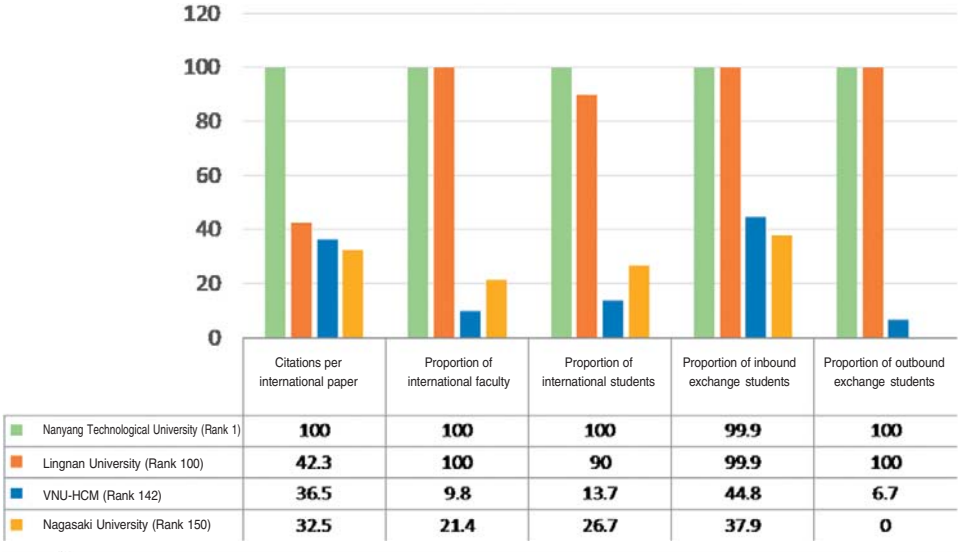
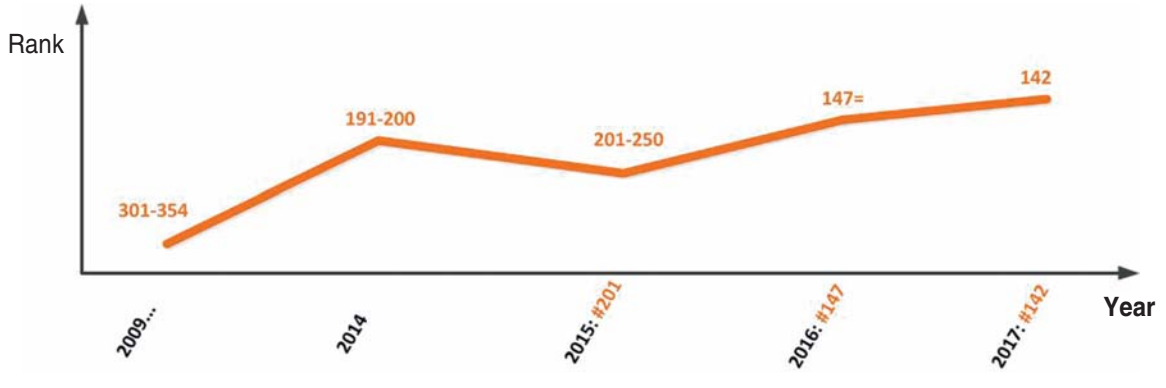


Figure 1. *The benchmark of VNU-HCM's results and those of the 150 top universities in 2017*



The rank of VNU-HCM in the QS Asia Rankings in the period 2009-2017.

The declaration ceremony of the establishing of VNU-HCM Campusin Ben Tre. Photo by ***the Campus***

VNU-HCM Campus in Ben Tre Province: FOSTERING THE HUMAN RESOURCE FOR THE SOUTHWEST REGION IN VIETNAM

ON JULY 18 TH, 2017, VNU-HCM CAMPUS IN BEN TRE PROVINCE (CAMPUS) WAS ESTABLISHED UNDER THE MINISTRY OF EDUCATION AND TRAINING'S DECISION NO. 2411 / QD-BGDDT. THIS IS THE FIRST NATIONAL UNIVERSITY CENTER OF VIETNAM.

The campus is a public non-business unit operating in the fields of education and training, science and technology under VNU-HCM; It is a bridge for affiliated universities and units to provide opportunities for studying, researching and transferring science and technology, contributing to the training and fostering of human resources for stable and strong socio-economic development of the South West Region.

A center that provides undergraduate and post-graduate education. Accordingly, at the undergraduate level, candidates with a permanent residence certificate of up to 36 months in the Southwestern provinces and have average GPA of 10th, 11th and 12th grade up to 6.5 may use the results of their National High School graduation exam and the VNU-HCM's competency assessment test to apply for admission at the branch center. At the postgraduate level, the enrollment targets are cadres, civil servants, officials, teachers, lecturers and managers of enterprises operating in units located in the provinces of the Southwest. Successful applicants will be trained directly by VNU-HCM and receive official post-graduation diplomas.

In 2017, the collaborated branch center of VNU-HCM's member schools has deployed two undergraduate programs: Environmental Science (University of Science) and Urban Studies (University of Social Sciences and Humanities). 5 master programs are Environmental and Natural Resources Management; Civil Engineering and Industrial Engineering; Construction Management; Energy Management (University of Technology); and Economic Law (University of Economics and

The representatives are cutting the inauguration ribbon. Photo by ***Duc Loc***

The delegates are taking pictures on the establishemnt day of the Campus. Photo by ***Duc Loc***

Law). In the second admission term of 2017, the school branch will organize 4 more advanced courses including Economics Law, Business Administration (University of Economics and Law), Public Management (Management University) and Education Management (University of Social Sciences and Humanities).

In 2018, the VNU-HCM Campus in Ben Tre Province cooperated with VNU-HCM's member universities to plan for undergraduates enrollment in various fields in accordance with the needs and competencies of candidates in the South West provinces such as: Urban Studies, English Linguistics, Japanese Linguistics, Travel and Tourism Management, Journalism, Environmental Science, Biotechnology, Applied Biology, Economics, Banking and Finance, Natural Resources and Environment, Food Technology, Civil Engineering, Electrical Engineering - Electronics and Information Technology.

Currently, most students are studying at the registered center in Ben Tre. However, in the coming time, the number of students living outside Ben Tre province will increase considerably due to the center's ability to meet the needs of locality, its clear admission protocol and high education quality. In addition, Ministry of Education and Training, together with VNU-HCM, will implement many priority policies in enrollment and training at the center.

VNU-HCM'S ASSERTION OF ITS CAPABILITY OF RESEARCH PUBLICATION

IN THE PAST FEW YEARS, VNU-HCM IS ONE OF THE LEADING INSTITUTIONS IN THE FIELD OF SCIENTIFIC PUBLISHING, ESPECIALLY PUBLISHED WORKS IN RELIABLE INTERNATIONAL SCIENTIFIC MAGAZINES ACCREDITED BY THE ISI.

Until september 2017, VNU-HCM had 238 articles uploaded to the ISI database. In particular, the number of articles with citation index and social impact category Q1 accounted for 38%, Q2 accounted for 41% 1. In particular, 70% of international journal articles are authored by VNU-HCM scientists. This shows that VNU-HCM is increasingly promoting its internal capabilities in scientific research.

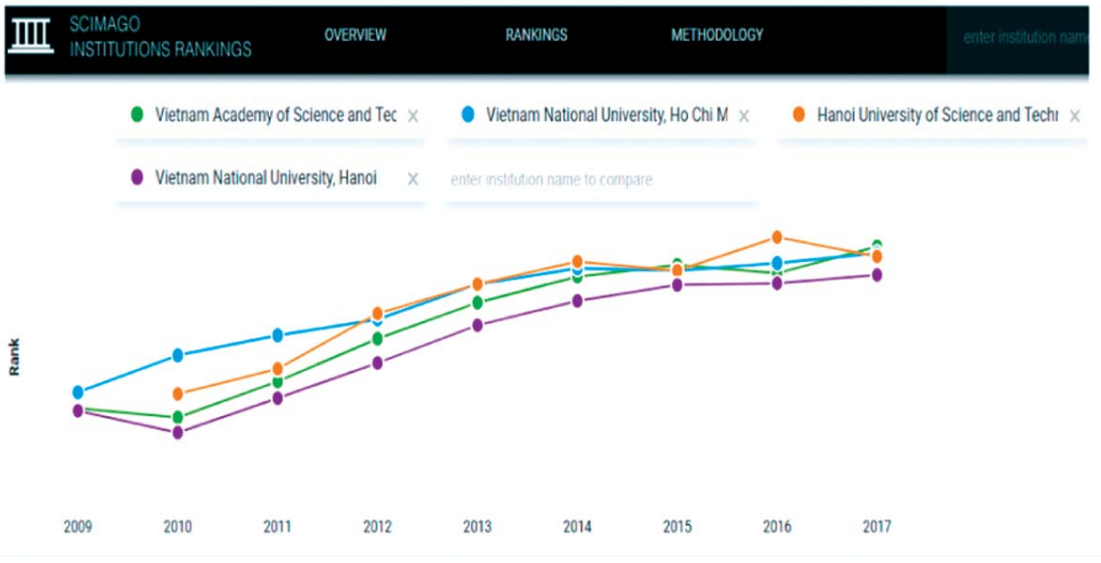
Besides the number of international publications with citation index and social impact, VNU-HCM also strongly increased the quality of international publication. In the past year, some of the strong research groups, such as the Research Institute for Material Research (University of Technology), INOMAR Research Center, Department of Mathematical Analysis, Multifunctional Materials Research Group, Synthetic and Natural Materials Group (University of Science), Department of Mathematics of Mathematics, Department of Biomedical Engineering and School of Biotechnology (International University) achieved outstanding international publication results with the number of articles and influential indexes respectively 13 (total IF 50.81), 11 (total IF 47.404), 21 (total IF 16.89), 16 (total IF 38.67), 15 (total IF 35.84), 19 (total IF 24.24), 18 (total IF 36.34) and 26 (total IF 66.66).

The publications of scientists and research groups have made important contributions to raising

The proportion of publication in the Q1, Q2, Q3 and Q4 journals in the SCImago rankings.

Table 1: *The statics of VNU-HCM's scientific research publications in the period 2012-2017*

Year	2012	2013	2014	2015	2016	9/2017
1. International journals	**300**	**412**	**566**	**619**	**732**	**372**
1.1.On the ISI list	179	267	341	372	392	238
Proportion of ISI papers/Total of international journals	60	65	60	60	54	64
1.2.Not on the ISI list but with ISSN	121	145	225	247	340	134
2. National journals	**415**	**566**	**579**	**722**	**797**	**298**
3. International conference proceedings	**612**	**768**	**965**	**1287**	**1396**	**624**
4. National conference proceedings	**500**	**672**	**928**	**1325**	**1284**	**478**
5. International paper/staff with a PhD	0.30	0.38	0.54	0.54	0.61	-
6. Average IF per year	1.88	2.02	2.21	2.28	2.05	-
Total	**1827**	**2418**	**3038**	**3953**	**4209**	**1772**



The ranks of 4 education instructions of Vietnam in line with the SCImago rankings in the period 2009-2017

Vietnam's universities in the 400 top universities in the QS Asia rankings

the position of VNU-HCM in the international rankings. In 2017, SCImago ranking organization which specializes in science and technology continue to rank VNU-HCM as the leading educational institution in Vietnam in science and second in innovation.

According to the QS University Rankings Asia, in 2017, VNU-HCM ranked 142nd , rising five places compared to 2016, remaining in the top 150 universities in Asia.

VNU-HCM had a relatively high score in peer review survey on academic reputation (58.3%); Survey on employer's opinion about the quality of graduates (47.8%). These are the most influential criteria (50%) among the 10 QS Asia rankings and are two of the three criteria (Academic Reputation, Employer Reputation, and Student Number. international) that VNU-HCM, compared with the others in Vietnam, has the highest score in the QSAsia rankings 2017-2018.

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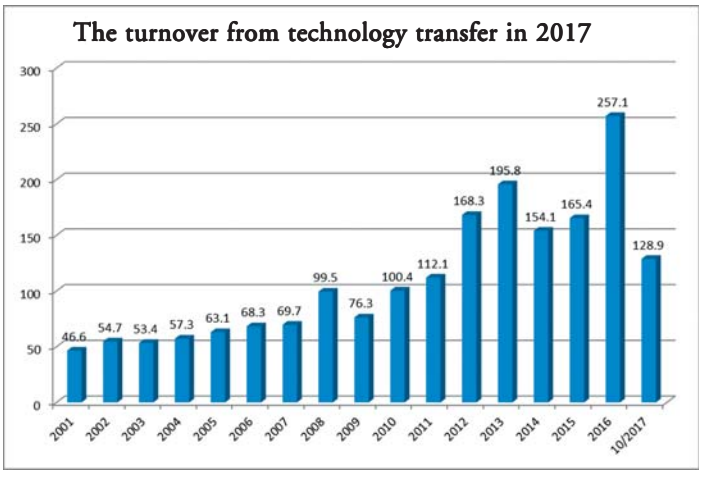
1. http://www.scimagojr.com/journalrank.php
2. http://www.scimagoir.com/rankings.php?sector=&country=VNM
3. https://www.topuniversities.com/university-rankings/asian-university-rankings/2018

Table 2: *The criterion rankings & ranks Vietnam's Science & Technology institutions*

Criterion / Institution	Ranking			National rank
	Research	Innovation	Societal	
Vietnam Academy of Science & Technology	2	1	3	1
VNU-HCM	1	2	2	2
Hanoi University of Technology	3	3	1	3
VNU-Hanoi	4	4	4	4



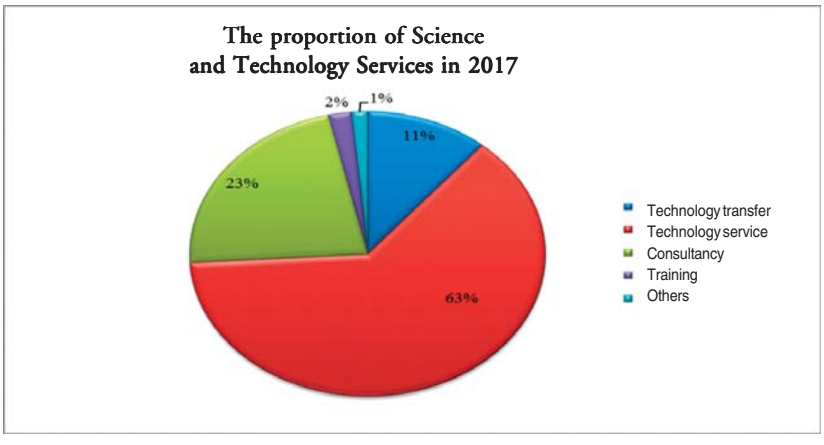
The turnover from VNU-HCM's technology transfer in the period 2001-2017

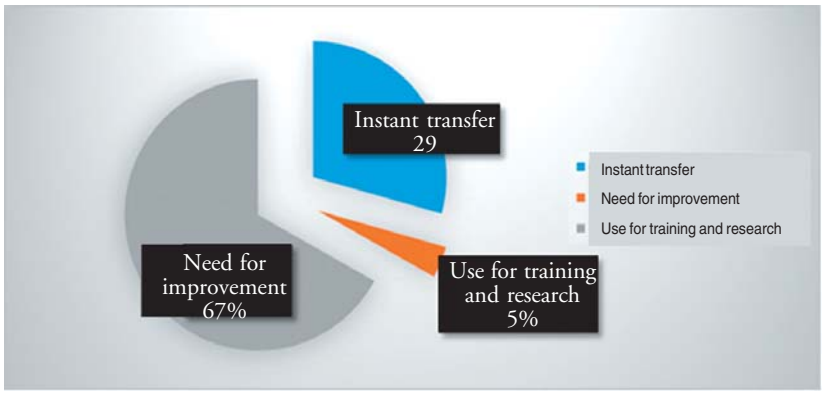
Since 2014, Vietnam's slow economic recovery (after the economic crisis in 2014) has resulted in the slump in incomes of scientific and technological organizations, including the organizations under VNU-HCM. However, these units are always trying to implement contracts to get the growth rate in 2016 to reach 257.1 billion. In 2017, VNU-HCM carried out more than 762 contracts on technology transfer and science and technology with total revenue of VND 128.9 billion.

In particular, contracts for the provision of scientific and technological services / technical services to industry accounted for more than 63% of total revenue; Contracts for technology transfer and scientific and technological consultancy account for 33% of revenue.

VNU-HCM'S PRIORITY TO THE TRANSFER OF TECHNOLOGY AND COMMUNITY SERVICE

BESIDES THE ACHIEVEMENTS OF SCIENTIFIC RESEARCH HI UNIVERSITY, VNU-HCM ALWAYS SHOWS THE ROLE AS A LARGE TECHNOLOGY TRANSFER CENTER IN THE SOUTHERN REGION.





Percentage of VNU-HCM's applied products

As at October, 2017, VNU-HCM has researched in making 133 application products. In particular, the number of instant application products is 39, accounting for 29%; the number of training and research application products is 5, accounting for 4%, and at the moment, 89 products which account for 67% need continuous investment in research and development.

Many researches of VNU-HCM are highly appreciated by the community. Typically, there is the production of fresh water storage bags for daily life and work of Ben Tre people from a research team in the Faculty of Materials Technology (University of Technology); "Investigation of the nature of PVA-nano Ag / chitosan, HA / PVPA and HA / PVPA / chitosan for biological glue to treat skin damage "of the team in the Department of Biomedical Engineering (International University).

Currently, VNU-HCM is waiting for the Prime Minister's approval to make its Research Center for Industrial Technology and Equipment of the University of Technology into a joint stock company, contributing to the increase in income from science and technology transfer activities.

HCMC Party Committee Secretary's visit to the ITP. Photo by ***the ITP***

STARTUP ACTIVITIES CREATIVITY AND INNOVATION AT VNU-HCM

ACCORDING TO THE TECHSTARS - A SEED INCUBATOR PROGRAM AT BOULDER, US, THE DEVELOPMENT OF A LOCAL STARTUP ECOSYSTEM IS AFFECTED BY 5 CORE ELEMENTS: TALENT, CULTURE, DENSITY, CAPITAL, AND REGULATORY FRAMEWORK

In particular, talent is the cornerstone element of start-up ecosystem. In order to develop a sustainable start-up ecosystem, it is necessary to start from the development of a talented young generation with new thinking.

The role of universities

The role of universities in the start-up ecosystem is reflected in its missions: Training and developing talents, including start-up entrepreneurs, managers and professionals; Providing technology, an important resource for fast growing businesses; Providing infrastructure, facilities, laboratories for businesses or startup projects.

In particular, the main mission of universities is to train and develop talents. Of course, universities can set up nurseries, but its purpose is to create a practical learning environment for students, to help students accumulate knowledge and skills in start-up projects management instead of business development (if any, it is only a by-product).

To effectively train and develop entrepreneurial students, universities need to create a holistic environment to help students experience, explore, and accumulate knowledge and skills about entrepreneurship.

Realistically, start-ups are not for every student. Statistics show that about 2-3% of students are inclined to start their own businesses, and only a fraction of them will actually become entrepreneurs.

Business start-up at VNU-HCM

Since 2014, VNU-HCM has set a goal to turn VNU-HCM Information Technology Park (ITP) built in the urban area of Vietnam National

Training activities for seed incubators. Photo by ***the ITP***

University - Ho Chi Minh City into a creative start-up cluster, focusing first on information technology and communication and then gradually opening up to other fields, anchoring to connect VNU-HCM with the ecology of the start-up of Ho Chi Minh City.

In its early stages, the ITP focused on helping young entrepreneurs enter the ITP as a nucleus for start-ups. So far, the ITP has supported 40 startup projects, and about one-third of these projects have been able to call for pre-Serie A incubators. The startup projects have created over 300 jobs and become the professional environment for hundreds of interns every year. In particular, Mimosatek has been selected as one of the three best projects (behind Singapore's two projects) at Demo Day for smart city solutions launched by the Mekong Region Initiative (MBI).The AMI's first-run talent search competition - TECHFEST 2017 - is also one of the ITP's startup projects.

At the same time, the ITP has also built a close link with the start-up ecosystem in Ho Chi Minh City. The ITP has partnerships with ecosystem stakeholders and is a sponsor for most of the community development initiatives such as the Ho Chi Minh City Incubator Network (HIN), Vietnam Mentors Initiative (VMI), the Women's Initiative for Startup and Entrepreneurship (WISE), the Novelind Knowledge Platform… The experience of building startup ecosystem is widely shared with nearly 20 provinces and cities in the South through the Curriculum Management Training Center incubator and a series of workshops to update the knowledge of support to start a business held in the local.

The ITP supports start-up students with a group of various activities:

The Awareness-raising group includes: (1) orientation sessions on start-up; (2) exchanges with start-up entrepreneurs (business travelers); (3) Visits and exchanges with the ITP startup business community.

The capacity and experience building group includes: (1) Creative Idea Contest; (2) internship program in startup businesses at the ITP; (3) iStartX startup accelerator...

Aims for the year 2020

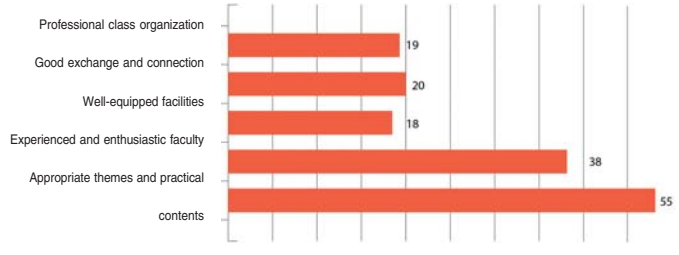
VNU-HCM aims to turn the ITP into a dynamic and creative start-up cluster of smart urban areas in the Northeastern gateway of Ho Chi Minh City, which is home to over 100 enterprises. With more than 2,000 jobs and internships for

The event Startup Open Day. Photo by ***the ITP***

STATISTIC INFORMATION (as of the end of 2017)

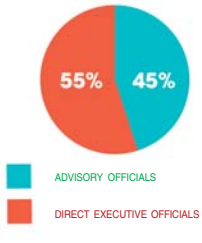
The ITP has organized 5 training courses for advisory and executive officials in management of business incubation and startup support activities from the branches and universities throughout the country.

STATISTIC FIGURES FROM 98 LEARNERS/ 5 COURSES
Impressions and feelings about the program



93% of the learners were willing to attend advanced programs in the future.

The advisory officials came from various positions in branches and universities throughout the country.



Support on training, advice, and develop the startup ecology system in localities

The localities' companion during the courses has been deployed.

thousands of students each year, it is the core to promoting startup activities of students and teachers in the whole VNU-HCM system.

To achieve this goal, VNU-HCM focuses on four activities:

Continuing to reinforce fundamental factors such as the accessibility to high quality human resources, including start-up entrepreneurs, managers and professionals in high-tech fields; network of advisers; angel investor network.

Packing, improving and closing the loop of startup-supportive activities from awareness raising, capacity development to practical experience.

Expanding and deepening connectivity with different start-up ecosystems in the region such as Singapore, Malaysia and Thailand; Supporting start-up businesses to access markets and resources in the region.

Connecting with innovative pioneering eco-systems such as Silicon Valley to expand global visibility, improve the quality of technology commercialization, and aim to create high-growth startups on the basis of making use of VNU-HCM technologies.

STARTUPS AND CURRICULAR PROGRAMS

ON A VISIT TO VNU-HCM, PRIME MINISTER NGUYEN XUAN PHUC AND HCMC PARTY COMMITTEE SECRETARY NGUYEN THIEN NHAN HIGHLYAPPRECIATED THE CONTRIBUTIONS OF VNU-HCM TO INNOVATIVE STARTUPS IN INFORMATION TECHNOLOGY AND COMMUNICATION. THIS IS BOTH AN HONOR AND A RESPONSIBILITY OF VNU-HCM TO ABIDE TO THE GOVERNMENT'S POLICIES ON FACILITATING INNOVATION – BUILDING THE COUNTRY.

We would like to share the opinion of Assoc. Prof. Dr. Huynh Thanh Dat - VNU-HCM President on the topic of innovative startups at VNU-HCM.

**** At the Opening Ceremony of the 2017-2018 academic year, VNU-HCM had a special speaker –the Secretary of Ho Chi Minh City's Central Party Committee, Mr. Nguyen Thien Nhan, who talked about "Students and Startups". What is the view of VNU-HCM?***

- Nowadays, the startup is a global trend and a driving force for the economic development of many countries. As one of the two largest centers for training high quality human resources for the whole country, VNU-HCM pays a lot of attention to startups and facilitating students' startups when they are still undergraduates. Therefore, VNU-HCM has chosen "Students and Startups" as the theme for the new 2017-2018 academic year.

In the startup ecosystem, talentsare one of the key elements. Talents here include potential startup entrepreneurs, talented managers and experts. The shortage of talents, especially potential entrepreneurs who can help build the foundation for the society, is currently the dilemma of the startup ecosystem in Vietnam. It is the responsibility of universities to overcome this weakness of the ecosystem in the long run. They must discover and foster a new generation of startup entrepreneurs for the local startup ecosystem.

In that spirit, since 2014, VNU-HCM has built a holistic system, which assists students in their own startups through activities that help raise their awareness, improve their skills, and allow them to experience the business/startups environment so that they can gain essential knowledge and skills for their future startups.

**** Mr. Nguyen Thien Nhan has once asserted that VNU-HCM must become the center of innovative startups. In your opinion, what has VNU-HCM done to archive this aim?***

- Deep insight to innovation and startups will be the driving force of Vietnam's economy in the new era, VNU-HCM has established the foundation to facilitate innovations and startups from a fairly early stage with concrete steps:

Firstly, in 2011, VNU-HCM established the Intellectual Property and Technology Transfer Center. At the same time, it promulgated the Regulation on Intellectual Property Management in VNU-HCM to promote the protection and commercialization of research results.

Secondly, in 2014, VNU-HCM set the aim to develop VNU-HCM Information Technology Park (ITP) into a startup district in the field of information and communication technology (ICT) and a foundation for the implementation of training activities and promotion of innovations in ICT. To date, the ITP has formed a dynamic startup community, closely linked with the startup ecosystem in HCMC and the whole country. Many businesses have here received millions of dollars from domestic and foreign investmentfunds.

Assoc. Prof. Dr. Huynh Thanh Dat - VNU-HCM Presidentis delivering a speech in a innovations and startups seminar. Photo by ***Minh Trang***

These achievements were highly appreciated by Prime Minister Nguyen Xuan Phuc and HCMC Party Committee Secretary Nguyen Thien Nhan.

On that basis, VNU-HCM has cooperated with the Ministry of Science and Technology to set up VNU-HCM Innovative Entrepreneurship Center and assigned ITP to coordinate all startup activities in the whole VNU-HCM system. To support this center, in 2016, VNU-HCM established VNU-HCM Startup Fund and raised VND 11 billion from enterprises' support for students' startups.

**** What are current prominent startup programs in VNU-HCM?***

- The primary mission of universities in the startup ecosystem is to identify and nurture potential entrepreneurs. To accomplish it, the universities need to create an overall system for students to directly experience and improve their own knowledge and skills in startup project management. This is what VNU-HCM puts in its mind when designing and implementing activities to support students' startups.

We are working on a wide range of activities to help students' startups, for example, awareness-raising activities such as startup talks, exchanges with successful startup owners, fieldtrips to startup companies in the ITP (Startup Open Day). Additionally, there are experience and skill building activities such as Creative Idea Contest, internship programs in startup companies in the ITP, and iStartX contest, and so on.

In the near future, VNU-HCM will develop new activities and improve the quality of existing activities. In particular, VNU-HCM is going to consider integrating the training of startup thought into the curricular program. In preparation for this, VNU-HCM has assigned VNU-HCM University of Technology to launch an innovation and startup training program for the faculty from VNU-HCM member universities.

**** In order to encourage students to join startups, the Government has just approved a programto support students' startups until 2025. What is your opinion on this project?***

- I think it is necessary for the Prime Minister to approve the project "Support on Students' Startups by the year 2025". This project will promote a coherent implementation of a broader startup thinking education for students, and create a startup society as a foundation to nurture and develop a generation of entrepreneurs who are capable of creating new values for society.

It can be said that the objectives of Government Resolution 35 on supporting and developing enterprises and Decision 844 on assistance policies on the national innovative startup ecosystem by the year 2025 largely depend on the results of the implementation of this project.

**** In your opinion, what role do teachers play in supporting students' startups?***

- Technology is an important driving force of innovative startups. Universities and research institutes are generally the main source of technology for the ecosystem. In turn, faculty members are directly involved in the creation of knowledge and technology. Thus, innovative startupsare often associated with or originated from universities or research institutes.

However, it is a long distance from technology to products and services so that they can become a commercialization success in the market; and commerce is usually not the strength ofteachers. The main task of teachers in technology commercialization projects is to support enterprises in developing and implementing technology. Business and market issues should be dealt with by entrepreneurs. Therefore, in order to make the cooperation between entrepreneurs/companies and teachers more effective, it is essential that teachers have entrepreneurial mindset. It is also worth noting that entrepreneurial mindset is a necessary but not sufficient condition to be an entrepreneur.

A very famous proverb says: "You cannot give what you do not own." Therefore, the role of teachers is mainly to train students for entrepreneurial thought, help them make contacts with companies so that they can learn about startups and make right career choices. Statistics show that usually only 2-3% of the students are inclined to start a business, and few of them become startup entrepreneurs later on. However, the training of entrepreneurial thought is quite essential for all students.

Of course, we have teachers who are also businessmen but the number of them is not high.

**** Last year, VNU-HCM reached VND 255 billion in technology transfer turnover. How much did students' research and startup projects contribute to it?***

- The majority of VNU-HCM's revenue comes from research and technology services. Direct contributions from intellectual property transfer and spinoffs from startup companies whose origins are universities are still very limited. This is what we want to improve in the future.

I think the university's goal of promoting startups is not for the direct financial benefits but for the long-term socio-economic impacts. This is a common mindset in developed countries such as Finland, which has greatly supported Vietnam in its efforts to improve its capacity for innovation.

VNU-HCM students participate in the startup market. Photo by ***Duc Loc***

BCPnanoparticles. Photo by ***the DBE***

NEW PRODUCTS FROM THE CRADLE OF THE BIOMEDICAL ENGINEERING DEPARTMENT

THE DEPARTMENT OF BIOMEDICAL ENGINEERING (DBE) OF VNU-HCM INTERNATIONAL UNIVERSITY WAS ESTABLISHED IN 2009 WITH THE MISSIONS TO INCORPORATE EDUCATION, RESEARCH AND ENTREPRENEURSHIP IN THE FIELD OF MEDICAL INSTRUMENTATION, BIOMEDICAL SIGNAL AND IMAGE PROCESSING, PHARMACEUTICAL ENGINEERING, AND REGENERATIVE MEDICINE.

Based on the models of Internet of Things and Cyber Medical System,the DBE has developed a lot of useful medical equipment. In addition, the DBE has researched and developed many biomedical materials used in human healthcare.

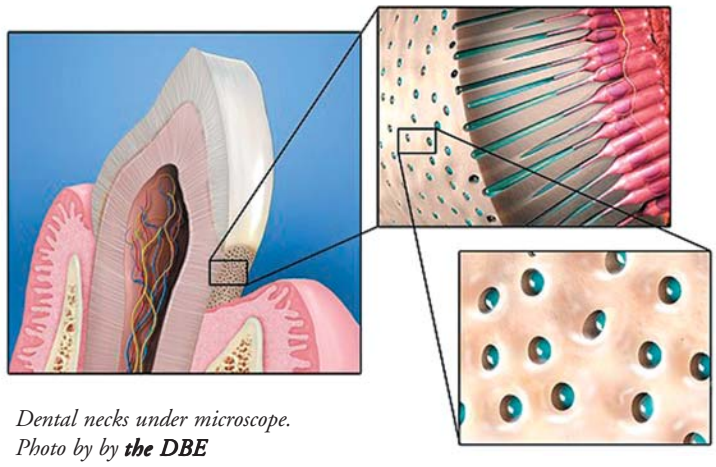
BCP nanoparticles – the material for bone and cartilage regeneration

Nanoparticles of Biphasic Calcium Phosphate(BCP) are synthesized using ultrasound. They are composed of mixtures of hydroxyapatite (HA), (Ca10PO4)6OH2, and beta-tricalcium phosphate (beta-TCP), (Ca3PO4)2. Among them, HA and beta-TCP are two compounds found in the composition of bones and human teeth. Thanks to its similar biological and structural properties to human bone, BCP nanoparticles are researched and developed to reproduce bone tissues, cartilage tissues as well as dental applications. After the research, the DBE designed a process to produce BCP nanoparticles for laboratory research.

Brushing Kit for sensitive teeth

For old people or people with gum recession, dental necks are exposed. Dentin tubules are microscopic channels that radiate from the dentin surface to the pulp of the tooth. Through an observation on electron microscope, we can see that more dentin tubules are around dental necks, and their diameters are wider. A stimuli such as heat, vapor, friction, chemicals, etc. on the exposed dentin surface creates fluid flow in the dentin tubules, causing pressure changes. This change stimulates the nerve, causing the feeling of pain. Dentists have found many methods to reduce this feeling, and among them, filling the Dentin tubules is an optimal method.

With that in mind, the DBE has researched and made a brushing kit consisting of BCP nanoparticles. When this kit is used, BCP nanoparticles fill the dentin tubules, desensitizing the teeth. The kit is both capable of scrubbing the

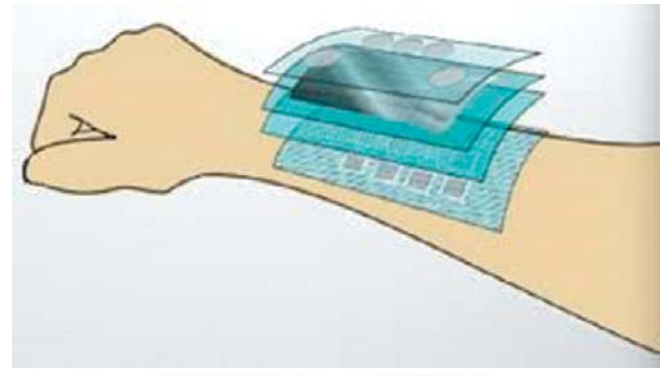


Dental necks under microscope. Photo by by ***the DBE***

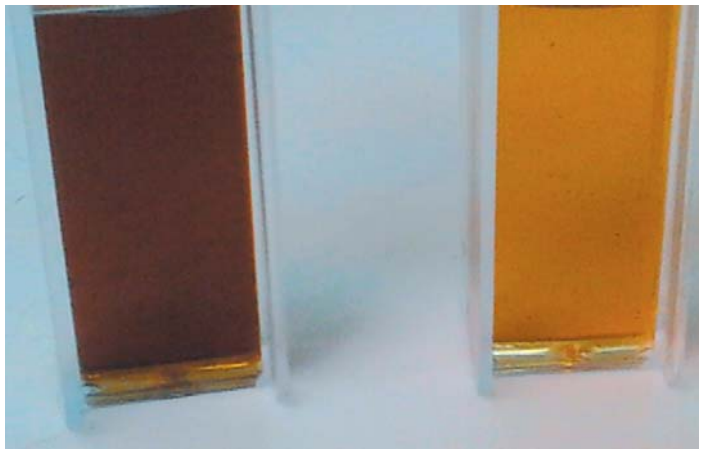
plaque off the teeth and filling the hole on the enamel and enhancing the regeneration of the enamel layer. In addition, gum recession is a common oral disease in Vietnam. Tooth paste containing BCP nanoparticles is useful as they can fill the exposed dentin holes with BCP nanoparticles.

Synthesizing Nanosilver

Silver has been used extensively in medicine as it is antibacterial and able to boost a healing process. Along with the development of nanotechnology, silver nanoparticles with 1-100 nm diametershave been produced with enormous potentials as a biomedical material. Silver nanoparticles have outstanding properties such as an effective and sustained antibacterial ability. Therefore, the DBE has developed a radiation synthesis method that produces physically stable silver nanoparticles gel that can be applied to bandages or other medical devices.



Nanosilver synthetized by BME. Photo by ***the DBE***



Silver-nanoparticles-loaded antibacterial films. Photo by by ***the DBE***

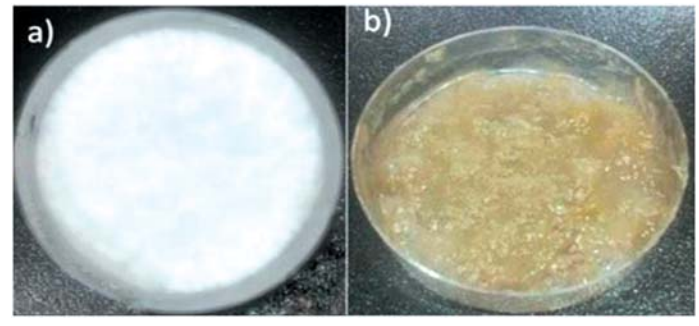
Antibacterial films and gel

The DBE has researched and developed a new material (silver-nanoparticles-loaded Polyvinyl alcohol/chitosan hydrogel) with antibacterial properties and high bio-compatibility, which can be used for wound dressing.

This new material can be used in film or gel forms. Silver-nanoparticles-loaded PVA/ Chitosan film is successfully synthetized with microwave-assistance.The addition of silver nanoparticles makes the material's antimicrobial properties considerably improved. Chitosan/ Polyvinyl Alcohol Silver Nanoparticles films can be used as bandages to shield open wounds on the skin to prevent microbial infections and speed up the healing process.

Prof. Dr. Vo Van Toi, Head of the DBE said: "The impressive achievements are the results of the talent and creativity of our teachers and their enthusiasm for students 'effective cooperation, and our dynamic working environment as well."

Some of these products have been transferred to the Incubator program of HCMC Hi-Tech Park, and we are on the road to establish a startup company to introduce these products to the market, following the entrepreneurial orientation in the DBE.



Silver-nanoparticle antibacterial gel. Photo by ***the BME***

Delegates attending the conference. Photo by ***Vietnam News Agency***

VNU-HCM'SCONTRIBUTION TOWARDS THESUSTAINABLE DEVELOPMENT OF THE MEKONG DELTA

ON SEPTEMBER 26 - 27, 2017, VNU-HCM DELEGATIONS, LED BY ASSOC. PROF. DR. HUYNH THANH DAT - VNU-HCM PRESIDENT, ATTENDED THE CONFERENCE ON SUSTAINABLE AND CLIMATE-RESILIENT DEVELOPMENT OF THE MEKONG DELTA. THE CONFERENCE WAS CHAIRED BY PRIME MINISTER NGUYEN XUAN PHUC AND FOCUSED ON POLICIES ON THE MEKONG DELTA'S SUSTAINABLE DEVELOPMENT OF MEKONG DELTA IN FACE OF DIFFICULT CHALLENGES.

Three major challenges

The meeting affirmed that Mekong Delta was not only a key food production region but also a major center of energy, services, and tourism of the whole country, and a bridge to regional economic integration as well. However, the region is now facing many "resonating" challenges and difficulties. Therefore, it is necessary to have strategic solutions to create "turning points" or "breakthroughs" to help the Mekong Delta's sustainable development as soon as possible.

In the discussionsection entitled "Challenges, opportunities and transformation strategies for the Mekong Delta", VNU-HCM acknowledged that the Mekong Delta was facing three major challenges: climate change and sea level rise, over exploitation activities in the Upper Mekong region, and insufficient policies, human resources, and infrastructure for the region to reach full potential. Therefore, VNU-HCM proposed some directional solutions: Planning for development of mining and processing industries near raw material areas, and development of integrated agro-industry models for efficient use of resources and improvement of the economy; developing local natural resources protection models to cope with the impacts of climate change, bringing into play the strengths of ecosystems available in economic development; developing sustainable livelihood models for poor people in rural

neighborhood; improving adaptive capacity of agricultural production models for different economic sectors, identifying barriers to improve institutions, policies, create legal corridors (flexibly) to adjust, develop, and expand successful economic models; introducing livelihood models for the upstream, middle, downstream, and coastal Mekong Delta which are customized to water sourcesand to cope with climate changes.

Human resource development

In the plenary session, Prime Minister Nguyen Xuan Phuc said that the permanent solution for sustainable development of the Mekong Delta in the current context was to develop local human resources. VNU-HCM proposed two issues related to education and application of science and technology.

For education, it is essential to strengthen the local human resource training in Mekong Delta. Accordingly, general education needs breakthrough and customized solutions to improve the quality of teachers, with which the government will place orders for big universities (in HCMC and Can Tho province) in cooperative implementation. For vocational education, it is essentialto urgently re-plan the network of universities in the Mekong Delta with suitable trades for the overall development of the region via establishing new campuses of prestigious universities in the region rather than new universities, encourage and facilitate the cooperation between prestigious universities and local universities in training and scientific research, allow the universities to determine their own enrollment quota for the region, and improve the assessment quality for better education quality so that the high quality education of the whole region can be gradually achieved.

On the application of science and technology, VNU-HCM and Vietnam Academy of Science and Technology were assigned by the Government and the Ministry of Science and Technology to implement the program "Science and technology for the Sustainable development in Southwest region" (SW Program). To create and utilize of the synergy of different science and technology programs deployed in the same area, VNU-HCM recommended a state-level coordinator role, and a systemto encourage the coordination among the programs, and a common database on science and technology to share research results in the Mekong Delta.

Through this conference, VNU-HCM has continued to affirm and commit to training and providing high quality human resources for the Mekong Delta in particular and for the whole country in general, and at the same time, implementits scientific and technological strategies in the development of top research and service for the community. With the SW program alone, VNU-HCM has assembled many scientists from major institutes and universities, and attracted businesses and resources abroad to contribute to the sustainable development of the Mekong Delta.

Students of the International University in practice with stem cells under Dr. Bui Hong Thuy's instructions. Photo by ***Minh Chau***

IMPROVEMENT OF VNU-HCM'S CAPACITY OF INTERNATIONAL PUBLICATIONS

VNU-HCM IS ONE OF THE LEADING UNIVERSITIES WITH THE HIGHEST NUMBER OF PUBLICATIONS IN PRESTIGIOUS INTERNATIONAL JOURNALS. COMPARED WITH THAT OF THE PERIOD 2006-2010, THE NUMBER OF INTERNATIONAL PUBLICATIONS IN THE PERIOD 2011-2015 TRIPLED, FROM 787 TO 2,142 ARTICLES. HOWEVER, THIS NUMBER IS STILL LOWER THAN THOSE OF SOME OTHER COUNTRIES IN THE ASEAN REGION.

A reward of USD 500 for an international publication

Currently, the number of Vietnam's international publications in general and that of VNU-HCM's in particular have increased 17% per year. However, this rate is still quite low compared to the region. Specifically, the number of Vietnam's international publications is only equal to 15% of Singapore's and approximately 1/3 of Thailand's and Malaysia's. If this state remains, the number of Vietnam's by 2030 will only be equal to Singapore's in 2015, or by 2025 be equal to Thailand's in 2015.

Therefore, VNU-HCM developed the Project Improvement of the International Publications of VNU-HCM in the period 2017-2022, aiming to double the number of international publications in the 2011-2015. And then, VNU-HCM will increase over 55% of the international publications in the ISI and Scopus journals that are ranked in Q1. Each year, VNU-HCM will have nearly 1,000 articles published internationally.

To achieve this goal, VNU-HCM proposed 8 tasks and solutions, focusing on those to develop a mechanism to encourage the teaching staff to publish international papers. According to the Decree 99/2014 / ND-CP and commendation policies of VNU-HCM, lecturers who are lead

Having 4,000 papers published internationally in 2022

In the period 2017-2022, VNU-HCM aims to reach over 4,000 international publications with the Scopus/ISI index and the ratio of international paper/ PhD faculty over 1. At the same time, VNU-HCM will set up 8 robust interdisciplinary research groups, and construct 8 key programs equivalent with the 8 interdisciplinary research fields. VNU-HCM also makes a request for graduate students and post-graduate students in the VNU-HCM system to have over 1,000 ISI publications.

authors and co-authors will get a reward that is up to 30, 20, and 10 times their basic salary respectively or if they publish SCIE and ISI articles, or receive USD 500 if they publish papers in prestigious international journals. For research groups, the members are given a priority of not teaching more than 150 hours per year as required.

Establishing research centers with international standards

In addition to encouraging rewards, VNU-HCM builds strong and interdisciplinary research teams in conjunction with the VNU-HCM level and national level labsof key and fundamental sciences. These groups were established on the decisions by Vietnam's Prime Minister on the physics program, underlying science programs in chemistry, life science, Earth science, and marine science in the period 2017- 2025.

Particularly, the new point in this project is the integration of scientific research with postgraduate education. According to VNU-HCM's regulations, VNU-HCM level research projects at have to contribute to postgraduate training. VNU-HCM University of Technology has started providing grants for research projects of graduate and post-graduate students.

In addition, with the advantage of owning many labs of key and underlying sciences, VNU-HCM is going to increase its capacity and efficiently exploit specialized and key labs, thereby increasing the number of international publications of VNU-HCM.

The project also emphasizes that VNU-HCM is going to promote international cooperation in scientific research in accompany with the establishment of excellent research centers that are comparable with research centers of leading universities in Asia and in the world. VNU-HCM expects to establish an excellent center for materials science and interdisciplinary excellent center for high application products.

VNU-HCM is going to upgrade its Journal of Science and Technology Development so as to join the Scopus or ISI category, enabling its articles to be published faster and easier. VNU-HCM will unify the English titles of its member universities and affiliated organizations, and require researchers and lecturers with whose papers are sent to international journals to write the right titles .

Cell Reprogramming Laboratory for graduate education and scientific research, –the School of Biotechnology at VNU-HCM International University. Photo by ***Minh Chau***

VNU-HCM CITY – A MODEL OF TYPICAL UNIVERSITY-CITY COMPLEX

UNIVERSITY CITY COMPLEX (UC) IS A SOPHISTICATED MODEL FOUND IN MOST ADVANCED TERTIARY EDUCATION IN THE WORLD. PRIME MINISTER NGUYEN XUAN PHUC AND HCMC PARTY COMMITTEE SECRETARY NGUYEN THIEN NHAN ASSERT THAT VNU-HCM HAS ACHIEVED SOME INITIAL SUCCESS IN ESTABLISHING THE FIRST UNIVERSITY-CITY COMPLEX PROJECT IN VIETNAM. HOWEVER, TO BECOME A "SCIENCE UNIVERSITY-CITY COMPLEX" AS STATED IN VNU-HCM'S DEVELOPMENT STRATEGY FOR THE 2016-2020 PERIOD, THERE STILL REMAIN SOME PROBLEMS UNDER SERIOUS ANALYSIS AND APPROPRIATE DEVELOPMENT APPROACH.

Overview of Dormitory B. Photo by ***Nguyen Minh Hien***

Mr. Mai Thanh Binh –Director of the Center for management and development of VNU-HCM City Photo by ***NVCC***

We would like to present the opinion of Mr. Mai Thanh Binh - Director of the Center for VNU-HCM Campus Management and Development on the VNU-HCM City project.

**** The vision and mission of VNU-HCM are to build an Asia's leading university system and a typical university-city complex. What is a typical university-city complex?***

- Universities are increasingly expanding in scale, not to mention the tendency of associating and merging of universities to form university clusters comparable to a small town. Accordingly, the concept of a university-city complex was born. A university-city complex is defined as a complete community built around a university, with a population of 5 to 10 thousand people, providing students with a favorable learning and researching environment, comfortable accommodation, and convenient transportation, etc., for example, Bologna in Italy, or Cambridge and Oxford in England, and so on.

In fact, many similar concepts of university clusters have been used such as university city, university town, university area, or university community... In South Vietnam before 1975,

we had a "University Village" in Thu Duc. They all have a common structure with the universities as the nucleus and other functional areas to support the university community with an appropriate ecological environment.

The main function of a university-city complex is to provide an infrastructure for its universities and colleges, logistics and social security facilities under a certain management mechanism to operate and manage everything in the complex. It can be said that a university-city complex has its own characteristics, imposing special requirements in planning, design, construction, operation, and management.

VNU-HCM is recognized as the first university-city complex in Vietnam, converging the basic characteristics of an international university-city complex as I mentioned.

**** What is the vision of VNU-HCM City?***

- The completed VNU-HCM City will have five major functional areas: administration and service areas; research and technology transfer areas including software and science parks; dormitory zone (can host up to 50,000 students) and sport zone. There are two technology transfer parks located adjacently to the local facilities, used for implementation of research ideas and applications. The first park faces towards HCMC Hi-tech Park, the other Binh Duong - Dong Nai provinces

In addition, library systems, laboratories, sports centers, student cafeterias, and convenience stores are all within a unified management network with a "one card" service, allowing the students and staff to share all facilities and services, avoid any duplication of investment and waste of resources.

In terms of spatial structure, it will be a mixed urban area with multi-layered space: Residential area - Commercial area - Study and research area - Open space, creating a mix of learning, working and living. This functional mix provides this university city with a new, more diverse approach to the needs of students, while ensuring the full range of services and commerce required.

University clusters are planned in a unified and uniform structure with the nuclear model in the center and training facilities scattered around. Accordingly, the center of the city will transmit

energy and inspiration to the clusters, and then spread to the centers, institutes ... Urban life and campus life interact, support each other, and link each other to form a unified structure. This is the highlight of the future university city.

**** To build such a university city, VNU-HCM has encountered many difficulties, hasn't it?***

- The first difficulty to be mentioned is the capital for compensation and clearance (C&C). Currently, the capital allocated to the C&C has not met the actual demand as the annual allocation of funds is slow, causing delays of compensation payment. The investment budget from the state allocated to build VNU-HCM City by 2017 is VND 4,860.5 billion. In particular, the budget for the C&C and resettlement is VND 1,631.5 billion, accounting for 33.57% of the investment budget.

Besides, the personnel allocated by Ho Chi Minh City and Binh Duong province to support VNU-HCM in its C&C are not enough. As at June 2017, the area of land acquired for VNU-HCM was 465.42 acres, reaching 72.3% of the total land area planned for the project. Particularly in Thu Duc area, the recovered land was 78.18 of 121.7 acres, accounting for 64.23%. In addition, the total floor area built by VNU-HCM up to now is 831,726 m2, equal to 32.12% of total floor area in the adjusted plan. Moreover, a resettlement fund for the C&C in Linh Trung ward, Thu Duc district, has not yet to be set up.

Therefore, in the meeting with , HCMC Party Committee Secretary Nguyen Thien Nhan at VNU-HCM in October this year, the leaders of VNU-HCM proposed the Secretary to direct the key local authorities to help it dealwith difficulties and obstacles in the resettlement work and C&C as mentioned.

VNU-HCM aims to complete the C&C by the year 2018.

**** Commenting on VNU-HCM's current architectural planning, Prof. Dr. Ngo Viet Nam Son said that this university had many shortcomings. What do you think?***

- The comment of this expert is completely objective and gives us a suggestion to develop the architecture and general planning of VNU-HCM City. Currently, the complex is not completed in terms of land clearance and basic infrastructure. Local people are still living in the area, therefore the fences are quite necessary. VNU-HCM has directed the affiliated organizations and member universities to opt for natural fences such as trees or vines... so that they blend with the environment and local architecture.

As planned and implemented, VNU-HCM has built many commonbuildings to save money in construction investment such as laboratories,

VNU-HCM Administrative Building as planned in the project. Photo by ***Minh Chau***

Model of the service and culture center of VNU-HCM City. Photo by ***Minh Chau***

student dormitories, guest houses, public houses, gymnasiums, student culture houses and various types of service buildings. As a result, the member universities and affiliated organizations have had a close association and cooperation, demonstrating the strength of the system.

**** Can you tell us when the construction VNU-HCM City will complete?***

- The completiontime depends on the state's annual fund for the C&C, the construction and the investment of the member universities as well as project financing constructions.

In the plan for 2016-2020, VNU-HCM aims to finish the C&C. However, to achieve this, there must be great support from localities (Binh Duong and Ho Chi Minh City,) and VNU-HCM needs to enlist the support of the Government and central ministries. Therefore, in this stage, VNU-HCM is striving to complete the work of C&C to create a premise for building and calling for more investment. In the next stage, VNU-HCM will fulfill the criteria of a smart city.

Assoc. Prof. Dr. Phan Thanh Binh - *Former Director of VNU-HCM*:

An intellectual service center of the key economic region

A locally-based university certainly has social interactions and is influenced by the local cultural identity. VNU-HCM for instance, located in a unique location, between HCMC and the Southeast and the Mekong Delta, plays a big role and has interactions with all its three adjacent areas. Imagine a future, a university city that houses 60,000 students and 10,000 officers and teachers, creating an intellectual and community service center in a key dynamic economic region.With that aim, we have proposed to divide Ho Chi Minh city into five urban areas, of which VNU-HCM is located in the North East (districts 2, 9, Thu Duc). If district 2 is planned to become a financial area, this region will have financial - educational science - culture facilities. In that relation, the Northeast gate of Ho Chi Minh City will have an educational-scientific-cultural city.

Architect Dr. Ngo Viet Nam Son:

The Architectural planning does not create an identity

From my field observations, VNU-HCM is still managed and run as a combination of several member universities that are operating separately (not effectively cooperating on education and research in a way that a university city should be) and dispersed (some campuses are in Thu Duc, some scattered in HCMC).Furthermore, many member universities in Thu Duc University Village have built high fences and their own flashy separate entrances. The boundary with the surrounding residential area is developing spontaneously, without any security. The current architectural planning does not create an identity, and there is no uncomplicated and convenient internal and external transport system. We can say that there are still a lot of things to build up a true university city here.

VNU-HCM'S PILOT PROJECT OF PUBLIC BICYCLES AND SELF-OPERATING SHUTTLE BUS

WITH THE PROJECT ENTITLED "EASY MOVE", VNU-HCM WILL BE THE FIRST UNIVERSITY CITY IN VIETNAM TO USE PUBLIC BICYCLES AND SOLAR POWERED BUS AS INTERNAL TRANSPORTATION VEHICLES.

Sample bikes with solar panels. Graphics by ***Thien Thong***

Sample self-operating buses. Graphics by ***Thien Thong***

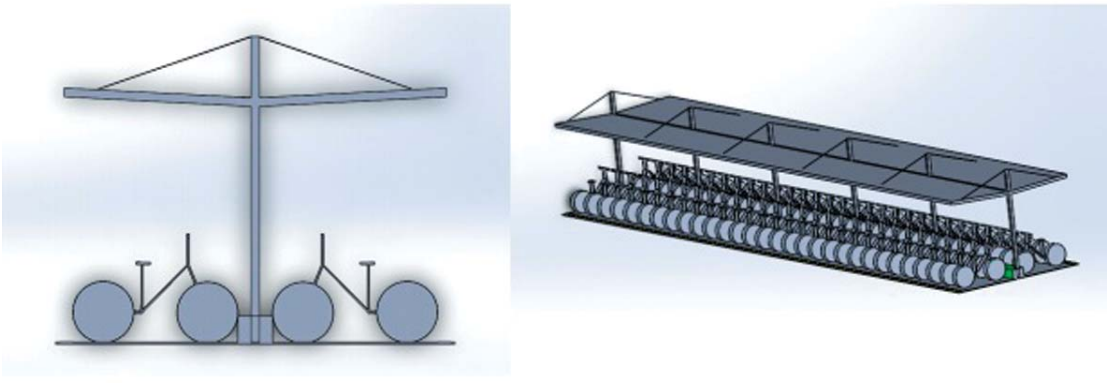
2,000 public bicycles

Mr. Nguyen The Viet in VNU-HCM Investment Promotion Service Center shared that the project was piloted in December 2017 with about 50 bicycles and 1self-operating bus. In the first three months, students could use the bicycles and buses for free; and then, the project would be evaluated before expanded to serve more than 60,000 students and employees studying and living in the University City.

"The highlight of this project is that the bike system will be managed and coordinated through a mobile app," said he.

The project is supposed to deploy 2,000 bicycles to meet the travel needs of teachers and students in the VNU-HCM City. This bike service is designed to automate vehicle leasing through the Easy Move application installed the smartphones. Accordingly, users are only allowed to travel within a limited-mapsystem from 6 a.m. to 5.30 p.m. every day (including Saturdays and Sundays).

Students are required to register their accounts through the website or mobile app to use the bikes for about 30,000 VND / month. Visitors or temporary members can also use the car by topping up their credits for each rental. For more convenience, bikes are put at the university's entrances, dormitories, bus stops, canteens, and the VNU-HCM Administrative building, or other places with paint lines.



Solar-powered bicycle stations. Graphics by ***Thien Thong***

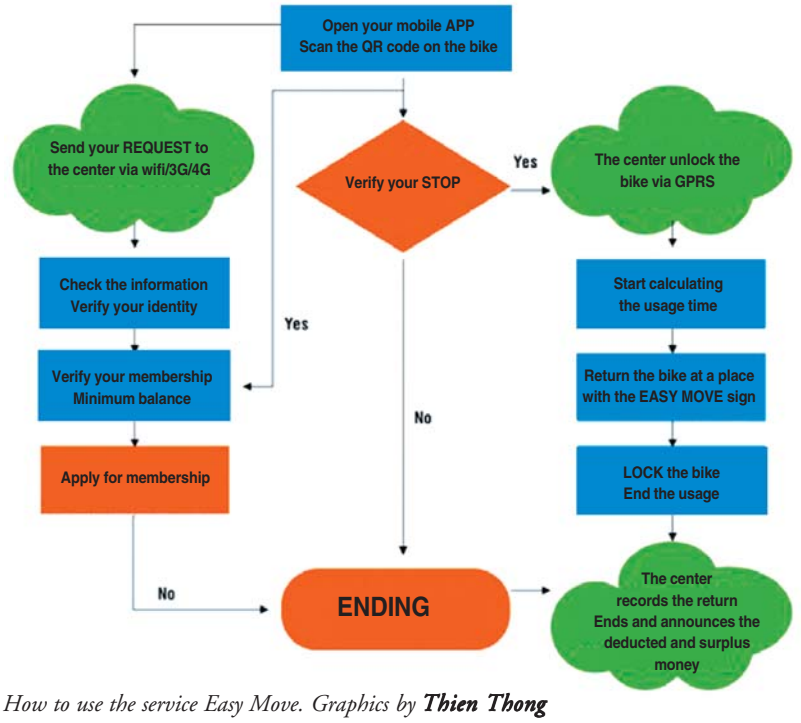
Users can pick up a bicycleat one station and return at the other fixed stations in the University City. Each bike has a QR code (fast response bar code) for users to use a smartphone to scan to unlock. The rental time starts when the bike is unlocked and ends when the bicycle is locked into a station. Bicycles are charged by solar panels and are equipped with GPS devices for easy administration.

Self-operating shuttle bus with GPS

For the self-operating shuttle bus system, two buses are expected to be put into service after the pilot period. They are 12-seat electric busesable to be recharged directly by solar panels on their body or at the stations. The buses operate using a magnetic self-tracking system, a GPS positioning system, and digital cameras to avoid obstacles. In addition, their doors are locked automatically when they move and automatically unlocked when they stop or in emergencies.

The buses have 12 seats in 4 rows. They use an AI to interact with users to make the journey more enjoyable. It is disclosed that the maximum load of a bus is 1.5 tons.

The self-operating shuttle bus and public bicycle project is launched by VNU-HCM in conjunction with some other corporations. With this project, VNU-HCM will be the pioneer in testing the high-tech public transportation to serve the community, creating a modern and civilized university city. In the future, this model will be widely applied to other residential areas in Ho Chi Minh City.



How to use the service Easy Move. Graphics by ***Thien Thong***

Prof. Scott Waugh - Executive Vice Chancellor of the UCLA (middle, front row) works with VNU-HCM. Photo by ***QHĐN***

VNU-HCM'S COLLABORATION WITH AMERICAN UNIVERSITIES

WITH THE AIM TO BECOME A TOP UNIVERSITY IN ASIA, VNU-HCM HAS BEEN INEXHAUSTIBLY EXPANDING ITS PARTNERSHIP NETWORK TO ENHANCE ITS SCIENTIFIC RESEARCH, TECHNOLOGY TRANSFER, AND TRAINING QUALITY ON THE ROAD TO APPROACH THE STATE-OF-THE-ART TERTIARY EDUCATION OF THE WORLD.

The Presidents of VNU-HCM and ASU are signing the Memorandum of Understanding of the two universities. Photo by ***QHĐN***

Prof. Scott Waugh - Vice Chancellor of UCLA on a visit to the Center for Innovative Materials and Architectures. Photo by ***QHĐN***

Most notably is the collaboration with two prestigious universities of the United States, University of California, Los Angeles (UCLA), and Arizona State University (ASU).

State-of-the-art Research

The start and development of the Molecular and Nano architecture (MANAR) marks a milestone of VNU-HCM in materials science with the collaboration with the UCLA.

After the visits in the period 2008-2011, the leaders of VNU-HCM and UCLA officially signed a Master Cooperation Agreement (MOU), discussed the Master Affiliation Agreement and the first in materials science collaboration, and founded MANAR Center.Then, VNU-HCM built the MOF Materials Laboratory (in University of Technology), formed MOF Materials Research Group (in the University of Science) and established the first MANAR Research Center in Vietnam called The Center for Innovative Materials and Architectures (INOMAR). To date, the INOMAR has created a new academic environment with modern technology and professional working culture.

In August, 2013, VNU-HCM and the UCLA reached an agreement to expand their collaboration in biomedical and cancer research with the support of the Center for Global Mentoring and Johnson Comprehensive Cancer Center. Facing global challenges, especially the increasingly complex epidemic, biotechnology research and development in preventing, curing and treating diseases is a sensible move of VNU-HCM. Through the collaboration with the UCLA, highly qualified scientists of VNU-HCM were directly involved in research and collaboration at international research institutes

and laboratories of the UCLA. In addition, the frequent co-organizing of international conferences on biomedical sciences in recent years has played an important role in fostering collaborative research in this emerging field. With the effective investment and collaboration, biotechnology promises to be a key for VNU-HCM to contribute to the industrialization and modernization of the country and the international integration.

On 16/12/2017, in Washington, USA, the two universities signed a collaboration agreement for the new period with the following contents: Continuing to support VNU-HCM in Biomedical training programs, focusing on cancer research; Developing a collaborative project on stem cells, research and implementation of artificial intelligence models to facilitate the search for appropriate treatments before the disease becomes dangerous, and create a database for monitoring, treatment, and further research.

Improvement of the training quality

In addition to enhancing the capacity of university management for leaders and administrators of the whole system, VNU-HCM also pay much attention to the quality of its faculty and curriculum. There are two notable collaborative projects with Arizona State University.

With the support of the Intel Corporation, United States Agency for International Development (USAID), and the Arizona State University , the implementation of "Higher Engineering Education Alliance Program (HEEAP)" was started in 2010. This project focuses on training faculty, designing academic programs, building labs, innovating pedagogical approaches to replace the passive teaching methods focusing only on theory with active learning and teaching based on applied practice.

Continuing the success of the HEEAP, in April 2016, the ASU launched the project "Building University-Industry Learning and Development through Innovation and Technology (BUILD-IT)" from 2016 to 2020 with a total budget of $ 10.8 million funded by USAID.

From 18 to 21 December 2017, VNU-HCM visited ASU in Arizona. On this occasion, the presidents of VNU-HCM and ASU signed a Memorandum of Understanding, marking a new step in the partnership of the two universities. The two collaborated on Vietnam Education Report Program which includes two main projects: "Assessment of post-secondary education in Vietnam" and "Establishment of an education database". The success of these two projects promises to provide necessary resources for a comprehensive assessment of educational reality in Vietnam.

With the support from Vietnam's Government and US diplomatic departments, the collaboration between VNU-HCM and US universities will continue to be successful, effectively contributing to the "radical and comprehensive reform of tertiary education" and "international integration" of Vietnam.

Prof. Scott Waugh - Vice Chancellor of UCLA on a visit to the Institute of Stem Cells. Photo by ***QHĐN***

STUDENT EXCHANGE PROGRAM THROUGH THE ASIAN CREDIT TRANSFER SYSTEM

THE ESTABLISHMENT OF THE ASEAN ECONOMIC COMMUNITY IN 2015 IS AN IMPORTANT STEP FORWARDS THE REGIONAL ECONOMIC INTEGRATION OF THE ASEAN NATIONS. A LARGE MARKET IS FORMED, REQUIRING YOUNG, DYNAMIC, AND HIGHLY INTEGRATED HUMAN RESOURCES.

To meet that demand, the ASEAN Credit Transfer System (ACTS) was established in 2011. It is a student exchange program, meant to improve the quality of training by ASEAN University Network (AUN).

Based on the student-centered orientation, the ACTS promotes the exchange and transfer of students among the AUN's member universities. Accordingly, the credits accumulated in the exchange programs are recognized by all its members. To date, the ACTS has attracted 30 member universities of AUN and some from China, Korea, and Japan. Not to be left out, VNU-HCM has been actively promoting this program.

In the second year of implementation of ACTS project, VNU-HCM accelerated the dissemination of the ACTS programs to students while enhancing the attractiveness of VNU-HCM as a reliable study destination in the region. Through various forms of promotion such as introducing programs to other member universities, disseminating information on the website of VNU-HCM, the ACTS has increasingly received the attention of students in the member universities.

In 2017, the ACTS online registration system has received 34 registrations from VNU-HCM students, four times higher than that of 2016. VNU-HCM is gradually completing the relevant processes and coordinates closely with other ACTS members to improve the quality of candidates and meet the students' increasing exchange needs.

On the other hand, VNU-HCM started acceptance of students from partner schools participating in the ACTS. In the academic year of 2017-2018, VNU-HCM accepted credit exchange students from Chiang Mai University, Thailand.

Thanks to its regionally and internationally accredited training programs, advanced curricula, and honors programs, VNU-HCM has attracted more and more international students.

It can be said that the implementation of the ACTS has contributed to enhance the image and value of VNU-HCM, opened up more chances for VNU-HCM students to become ASEAN citizens, and increased the competitiveness of Vietnam's labor force in the region.

The AUN-ACTS Executive Board Meeting in July 2017. Photo by ***QHĐN***

Natchanan Soisak, a student from Chiang Mai University, Thailand studying in VNU-HCM University of Economics and Law through the ACTS. Photo by ***QHĐN***

Assoc. Prof. Dr. Huynh Thanh Dat is delivering a speech in the Summary Conference of the period 2013-2017, and signing the Cooperation Agreement for the period 2017-2022 between VNU-HCM and Binh Duong Province. Photo by Duc Loc

CONTRIBUTION TO THE COMMUNITY IS THE RESPONSIBILITY AND MISSION OF VNU-HCM

THIS IS A LEDGE MADE ON 24/8/2017 BY ASSOC. PROF. HUYNH THANH DAT –VNU-HCM PRESIDENT IN THE COOPERATION AGREEMENT SIGNING CEREMONY WITH NINH THUAN PROVINCE ON SCIENTIFIC RESEARCH, TECHNOLOGY TRANSFER, HUMAN RESOURCES IN THE PERIOD 2017-2021.

Assoc. Prof. Dr. Huynh Thanh Dat recalled this act in the summary conference of the period 2017-2022 between VNU-HCM and Binh Duong province on 22/9/2017. Accordingly, all future collaboration projects between VNU-HCM and other provinces should yield outcomes that benefit the community.

Technology transfer and human resource training

According to Mr. Luu Xuan Vinh, Chairman of Ninh Thuan People's Committee, in 2011, the Prime Minister approved the master plan for economic development of Ninh Thuan province by 2020. Accordingly, Ninh Thuan should pay a lot of attention to develop high quality human resources as a key to develop its industries. With its natural characteristics, the province should focus on four sectors: energy, tourism, agro-forestry, and fishery and processing. Two auxiliary products are education and construction.

In 2016, VNU-HCM sent some experts to survey the development needs of Ninh Thuan province as a basis for signing a cooperation agreement between the two partners. In particular, VNU-HCM uses its strengths to support Ninh Thuan in research, implementation, and policy consulting for tourism development projects, environmental treatment of shrimp seed production, transfer technology to build fishing boats using composite materials, improve the quality of Phan Rang garlic products, develop banana processing industry, preserve natural water sources for people and industry, renewable energy research...

At the same time, VNU-HCM implements projects to standardize the staff and civil servants of Ninh Thuan province through bachelor, master and

doctoral education programs; improve professional, language, and computer skills of local teachers, and support Le Quy Don High School in developing its staff and educational resources.

In addition, VNU-HCM helps Ninh Thuan province to train and transfer techniques to select high-quality livestock breeds, crop strains, and aquatic species; preserve and process agricultural products; and improve quality of medical examination and treatment, and production of pharmaceutical products.

Mr. Luu Xuan Vinh expects Ninh Thuan province to participate in the scientific and technological programs hosted by VNU-HCM in the locality. He also suggested the State to approve research projects that suit the needs and potentials of Ninh Thuan province.

Assoc.Prof.Dr. Huynh Thanh Dat asserted: "VNU-HCM always considers support for community as its goal, responsibility, and mission. For the best results, VNU-HCM is committed to allocate counterpart fund appropriate to Ninh Thuan's budget on their implementation of research projects."

In the coming time, the two partnersis going to set up a working group to elaborate a concrete plan for the implementation of the cooperation agreement.

Enhancement of the cooperation in the new period

In the period 2013-2017, VNU-HCM and Binh Duong completed the objectives of their five-year cooperation agreement, with five project groups implemented:cooperation in developing high-quality human resources for socio-economic development, industrialization and modernization of Binh Duong province; construction and development of the High School for the Gifted; provision of support for local universities and enterprises; commercialization of Phu An Bamboo Ecological Museum Project; and support for development of the facilities of VNU-HCM.

VNU-HCM delegates and Ninh Thuan province are signing theCooperation Agreement. Photo by ***Ninh Thuan Newspaper***

Specifically, VNU-HCM organized specialized training courses for the staff and civil officials of Binh Duong Province; assisted Hung Vuong secondary school to foster and train its talented pupils; shared with Thu Dau Mot University experience on undergraduate and postgraduate education, and organized large-scale scientific seminars; and assisted the Eastern International University in its scientific research and training of high-level human resources.

Besides, Binh Duong People's Committee and VNU-HCM had many cooperation programs in scientific research and technology transfer. Binh Duong province supported the work of compensation, clearance, and resettlement for the construction of VNU-HCM City with a total value of nearly 700 billion ...

Assoc. Prof. Dr. Huynh Thanh Dat highly appreciated the effectiveness of the cooperation program during the past 5 years. He emphasized that VNU-HCM would make great efforts in training human resources for Binh Duong province and at the same time request the member universities and affiliated organizations to take more initiative in the cooperation with Binh Duong province.

Mr. Tran Thanh Liem - Chairman of Binh Duong People's Committee highly appreciated the enthusiastic support of VNU-HCM. He hoped that VNU-HCM would continue to provide more favorable conditions to help Binh Duong province develop and implement socio-economic development programs in the coming time.

At present, Binh Duong People's Committee and VNU-HCM have signed a cooperation agreement for the period 2017-2022. Accordingly, VNU-HCM is going to deploy scientific research projects, transfer technology, training and fostering high quality human resources to contribute to the development of Binh Duong province into a prosperous smart city. The two partners confirmed their determination to increase their cooperation in the future.

STUDENT EXCHANGE PROGRAM WITH DAEGU CITY, KOREA

AS A PIONEER IN VIETNAM'S EDUCATION, BESIDE THE FOCUS ON EDUCATION, SCIENTIFIC RESEARCH, AND TECHNOLOGY TRANSFER, VNU-HCM ACTIVELY PROMOTED STUDENT EXCHANGE PROGRAMS DURING THE PAST YEARS.

After some official visits by leaders of Ho Chi Minh City, Vietnam and Daegu City, Korea, in late 2016, the two cities agreed to launch many cooperation programs, including the promotion of communication and student exchange between HCMC and Daegu City.

The program started with a bilateral exchange taking place in mid-2017. From 5 to 8 July, a delegation of VNU-HCM students, lecturers, and officials visited Korea and joined Daegu 50 students to experience the unique culinary culture of Korea, explore the lifestyle and culture of local people, visit Daegu's landmarks such as Seomum Night Market, Shinsegae Centum City Department Store, the operating station of public transportation system, and the research centers for 3D printing technology and drone development.Some academic activities were also imbedded in the trip through a visit to Kyungpook National University and a presentation of Kyungpook National University on the importance of international exchanges. The exchanges went well and further strengthened the friendship between the two parties.

The second phase of the program took place in Ho Chi Minh City and Da Nang City from August 14 to 20, 2017. The Daegu's 42member delegation of students and lecturers visited VNU-HCM City and attended a presentation on Vietnamese culture. The delegation also visited the representative office of Daegu City in HCMC, as well as attractions in Ho Chi Minh City and Da Nang City. They also had a cultural exchange with the students of VNU-HCM and Da Nang University.

The exchange program between VNU-HCM and Daegu City in 2017 was not only a new milestone in the partnership between HCMC and Daegu City, but also a meaningful activity on to celebrate of the 25th anniversary of bilateral diplomatic relations between Vietnam and South Korea (22/12/1992 - 22/12/2017).

Similar in of history and culture, the friendships of the two governments and of the people of Vietnam and Korea are getting increasingly deeper and bring about considerable achievements in many fields, contributing to the cooperation and development in the region and in the world.

From a comprehensive partnership in 2001 and then a strategic partnership in 2009, the relations between Vietnam and Korea have been developing well in all aspects. In terms of economy, Korea has become the largest foreign investor in Vietnam. In terms of tourism, the number of exchange visitors between the two countries doubled and reached a record of 1.75 million in 2016. Currently, nearly 150,000 Vietnamese are living, studying, and working in Korea, while the Korean community in Vietnam is very crowded. In particular, Vietnam has become an ideal destination in South East Asia for Korean students. VNU-HCM accepts about 3,000 Korean exchange students each year, accounting for about 85% of short-term foreign exchange students in Vietnam.

The success of the student exchange program between VNU-HCM and Daegu City in 2017 promises to open many collaborative relations in education and research between VNU-HCM and universities in Daegu City.

VNU-HCM delegate is watching a baseball game in Samsung Lions Park. Photo by ***QHĐN***

Daegu students on the exchange meeting with VNU-HCM students. Photo by ***QHĐN***

Assoc. Prof. Dr. Huynh Thanh Dat is welcoming the delegates from 30 AUN member universities. Photo by ***Duc Loc***

COMMITMENT AND ACTION FOR A PROSPEROUS ASEAN COMMUNITY

THAT IS THE KEY THEME OF THE 6TH ASEAN STUDENT LEADERS FORUM (ASLF) CUM 2ND AUN-STUDENT AFFAIRS NETWORK (AUN-SAN) CO-HOSTED BY VNU-HCM AND CAN THO UNIVERSITY FROM 5 TO 9 DECEMBER.

With the attendance of 95 members of staff and students from 23 AUN member universities from 9 Southeast Asian countries, this program marked the largest number of delegates after 6 times of organization.

Speaking in the opening ceremony, Assoc. Prof. Dr. Huynh Thanh Dat –VNU-HCM President sent his warm greetings to the delegations from 23 AUN member universities. He hoped that the 6th ASEAN Student Leaders Forum cum 2nd AUN – Student Affairs Network would be a place for the delegates to identify and discuss the opportunities and challenges of free mobility of skilled laborin the ASEAN Community, thus, having necessary preparation for students and commitment to support students from AUN member universities.

"We believe that the regional higher education, especially in the Southeast Asian University Network, has a very important role and responsibility in orienting education and training of ASEAN citizens who will later be parts of the free mobility of skilled laborin the region, and in exchanging and cooperating for the purpose of building a prosperous ASEAN community," Mr. Huynh Thanh Dat emphasized.

As the guest speaker, Mrs. Ton Nu Thi Ninh, former vice-chair of the Vietnam's National Assembly of the Foreign Affairs Committee, talked with students about the theme"Mobility of skilled laborin ASEAN: Opportunities and challenges for young people."

"According the report of McKinsey & Company, ASEAN is the least-known economic and political region in the world. That is the view from the outside. However, we cannot forgive ourselves if we do not know about our region. Be informed and proud of ASEAN, like Singapore

The official meeting of the 2nd AUN-SAN Summit in 2017. Photo by ***the Division of Student Affairs***

The delegates and guests are attending the opening ceremony. Photo by ***Student Affairs Network Board***

Assoc. Prof. Dr. Vu Hai Quan, Vice VNU-HCM President (rightmost) and Assoc. Prof. Dr. Ha Thanh Toan, Head of Can Tho University (left) are handing over certificates and souvenirs to the delegations in the ASLF and AUN-SAN. Photo by ***Student Affairs Network Board***

- a tiny island nation but an economic dragon of Asia," Mrs. Ninh called on everyone.

At the official meeting of the 2nd AUN-SAN chaired by Dr. Choltis Dhirathiti - Executive Director of AUN Secretariat, Prof. Dr. Abdul Malek Abdul Karim - Secretary-General of AUN – Student Affairs Network, Assoc. Prof. Dr.Nguyen Hoi Nghia - deputy director of VNU-HCM, Assoc. Prof. Dr. Le Viet Dung - Vice Rector of Can Tho University; and delegates responsible for the student affairs of 23 AUN member universities discussed and agreed on the commitment to support students' preparation for the mobility of skilled labor in the ASEAN Community and the operating

Assoc. Prof. Dr. Huynh Thanh Dat is presentinga souvenir to Mrs. Ton Nu Thi Ninh. Photo by ***Duc Loc***

Mrs. Ton Nu Thi Ninh is talking to the students about "Mobility of skilled labor in ASEAN: Opportunities and challenges for young people". Photo by ***Duc Loc***

principles of AUN-SAN. In addition, the delegates unanimously approved the report summarizing the activities of the AUN-SAN in 2017 and the work plan for 2018.

In the official session of the 6th ASLF in 2017, 64 student leaders discussed the two topics "Skills needed for students to participate in the free mobility of skilled laborin ASEAN" and "The Role of Student Associations in assisting Students in preparing for the free mobility of skilled laborin ASEAN".

In addition, the program organized exchanges and excursions to Cu Chi Tunnels, Vietnam History Museum, Can Tho Museum, Ho Chi Minh Museum, Binh Thuy Temple, Cai Rang Floating Market, and ASEAN Culture Camp ...

(Information and materials provided by the Division of Student Affairs)

The dance "Trong com" performance by VNU-HCM students. Photo by ***Duc Loc***

Students are taking memorial photos. Photo by ***Duc Loc***

Good impressions remaining in the mind of the delegates from other Asean countries.

After five days, the 2nd AUN-SAN and the 6th ASLF in 2017 successfully concluded with the views, commitments, and documents unanimously approved by the delegates. This is a basis for activities of the AUN Student Network in the coming years, and leaves the delegates with good impressionson the organization of the host and students of VNU-HCM and Can Tho University, as well as the history, culture, and people of Southern Vietnam.

The successful hosting of the program demonstrates the integration capacity of VNU-HCM, especially the student affairs system, contributing to enhancing international prestige and promoting the image of VNU-HCM to teachers and students in the region, thus, attracting more ASEAN exchange students to VNU-HCM. Notably, VNU-HCM successfully hosted the 6thASLF cum 2nd AUN-SAN and came up withsome agreements in education and training of young ASEAN citizens right in the year when ASEAN celebratedits 50 years of establishment and Vietnam's 22nd year membership of ASEAN.

(**Dr. Le Thi Thanh Mai**, Head of the Division of Students' Affairs of VNU-HCM, Deputy Chairman of the Organizing Committee)

Mr. Bui Van Ga - Deputy Minister of the Ministry of Education and Training, Assoc. Prof. Dr. Huynh Thanh Dat – VNU-HCM Presidenton the Enrollment Consulting Day at VNU-HCM Administrative Building in 2017. Photo by ***the Department of Student Affairs***

Career orientation – admission consultancy at VNU-HCM:

SYSTEMIC STRENGTHS AND LOCAL CONNECTIONS

THE YEAR 2017 WAS THE 2ND YEAR WHEN VNU-HCM NOT ONLY GRANTEDITS DIRECT ADMISSION TO TOP STUDENTS FROM HIGH SCHOOLS FOR TALENTED STUDENTS BUT ALSO THOSE WITH THE BEST GRADUATION RESULTS IN 2015 AND 2016 IN VIETNAM. ACCORDINGLY, THE NUMBER OF HIGH SCHOOLS FOR ITS "POTENTIAL" ENROLLMENT INCREASED BY 41%, FROM 82 TO 116 HIGH SCHOOLS.

A wide range of contents and forms

In the estimation based on 1,400 high schools, on average, about 50% of high school students are admitted to VNU-HCM. If there is a list of the top 300 high schools throughout Vietnam, there are about 120 schools located in the Mekong Delta, Southeast, South Central and Central Highlands. Thus, even though VNU-HCM's enrollmentconsulting program (ECP) in 2017 reached more "potential" high schools compared to 2016, but overall it was still at a "modest" rate.

Currently, the ECPs have become the trademark of VNU-HCM. These programs are held annually in the Southeast, Southwest and Central Highlands with diverse contents such as training vocational career counseling skills, admission counseling skills; providing trainings for experts, teachers, administrators, youth assistants ... Besides, there is an online consulting portal (http://tvtt.vnuhcm.edu.vn).

The ECPs have brought useful information to more than 200,000 students, of which, 20% of the information is provided through festivals, 60% through the ECPs and 20% through training courses for high school teachers. The members of ECPs have visited 20 provinces. Among them, except for Can Tho province, the remaining provinces are all in the top 20 provinces with the highest number of students enrolled in VNU-HCM.

VNU-HCM also published a number of publications and information portals for career

Dr. Le Thi Thanh Mai is delivering a speech in an ECP in Dong Thap province. Photo by ***the Department of Student Affairs***

VNU-HCM's participation in an ECP organized by the Tuoi Tre News in Đak Lak. Photo by ***the Department of Student Affairs***

counseling such as *College Admission Guide (Vol. 1, Vol. 2), Some Issues in Career Counselingfor High School Students*, a career counseling website (http://huongnghiep.uit.edu.vn), Social NetworkFanpages (VNU-HCM Admission, Career365_VNU-HCM...), applied data system (Career365)... These publications and information portals have received over 200,000 visits.

VNU-HCM's enrollment consultancy and career orientation in the ECPs sare more and more effective due to the following favorable conditions and factors: (1) Most of the member universities met their admission quota, the number of direct admission and prioritized admission of the MOET and VNU-HCM is increased compared to the previous year. (2) VNU-HCM's good branding, educational quality, and relevant services. (3) Experienced and enthusiastic consulting teams with comprehensive vocational guidance and accurate forecast of human resources. (4) Timely attention and encouragement from VNU-HCM leaders to individuals and organizations involved in the ECPs.

Search for new programs

To make the ECPs of VNU-HCM more professional and successful in 2018, the general information on admission should be standardized and disclosed early, especially information on the admission schemes by VNU-HCM, the enrollment via the competency assessment tests; and VNU-HCM should avoid disclosure of "planned" or "unofficial" information, etc.

Next, VNU-HCM should rank the enrollment priority based on students' options to meet the enrollment quota of each member university and their majors. Accordingly, VNU-HCM needs to develop a questionnaire system to check students' understanding of universities, majors and career paths of these majors; at the same time, it allocates more resources to organize its own programs, for instance the Conference of Principals of High Schools for Talented students.

VNU-HCM needs to study and compare the learning situations of students in different enrollment forms (direct admission, prioritized admission, and mass admission) and build a grading rubric to assess the essays of directly admitted students, and thus find out what students need in career consultancy.

In addition, VNU-HCM needs to study and design new programs that can spread far and wide throughout the country. Accordingly, they sent presenters to the training conferences on the national high school graduation exams by Departments of Education and Training in localities, the conference of potential high schools, the admission consulting conference in the Southwest region, and develop an information - communication channel through the domain http://huongnghiep.vnuhcm.edu.vn instead of the domain http://huongnghiep.uit.edu.vn

Finally, VNU-HCM needs to integrate the ECPs into its strategic plan and invest more in finance, personnel and means to develop the ECPs in line with the strengths of VNU- HCM.

MORE THAN 90% OF THE STUDENTS IN HONOR PROGRAMS BEING EMPLOYED BEFORE GRADUATION

HONOR PROGRAMS OF VNU-HCM WERE BUILT ON THE CONCEPT OF SELF-LEARNING, SELF-STUDY, AND SELF-EXPERIENCE THROUGH THE TRIANGLE INTERACTIVE MODEL: STUDENTS - LECTURERS, STUDENTS-SCHOLARS, AND STUDENTS – EMPLOYERS, WHICH HELPS STUDENTS UNLOCK THEIR FULL POTENTIAL.

IT students of the University of Science's presentation on poster designing in the class of Introduction To IT 2. Photo by ***the University of Science***

Elite human resources

Assoc. Prof. Dr. Huynh Thanh Dat, VNU-HCM President, said that the honor programs for gifted engineers and bachelors are one of the feasible solutions for VNU-HCM to carry out the task of training high quality human resources for the country. "The honor programs promote the active role of learners under the guidance of leading lecturers in activities such as: study planning, knowledge development, skills training, planning and assessment of research studies. The best learning conditions and environment are provided, helping learners to unlock their full potential,"he emphasized.

According to Assoc. Prof. Dr. Nguyen Hoi Nghia, Vice Director of VNU-HCM, in the period of 2013-2017, the Honor Program Project was implemented on 21 programs in 5 member universities with more than 1,700 students, accounting for 4% of the total undergraduate full-time students at VNU-HCM.

At present, the structure of VNU-HCM's honor programs is based on the regular training programs with the minimum number of advanced credits accounting for 25% of the total number of credits. "The allocation of 25% of advanced credits enables the faculties to focus on the design of advanced subjects to make a clear difference to the mass programs. To join the honor programs, students must finish 2 to 3 semesters of general education, have good academic performance, and meet all the requirement set by their departments/faculties" he explained.

An online lesson with experts of students in honor program.
Photo by ***the University of Science***

As at October, 2017, VNU-HCM had 548 students graduating from the honor programs in the period 2013-2017, with 46% of them achieving good and excellent grades, and nearly 50% achieving satisfactory grades. Assoc. Prof. Dr. Dinh Duc Anh Vu said: "Over 90% of the students in the honor programs have jobs before and right after their graduation; 51% of them continue to pursue higher education, and 76% work in the fields of research and teaching... This result shows that graduates from the honor programs have met the standards of high quality human resources for the country and they are elite human resources of VNU-HCM."

100% of the honor program students have good career development

The honor programs of VNU-HCM are administrated at three levels, namely VNU-HCM, member university, and faculty levels. Thanks to the deployment of such honor programs, all the member universities of VNU-HCM satisfy the international standards set by reputable organizations such as AUN, ABET, AACSB, HCERES... and are all accredited.

According to Prof. Dr. Tran Minh Quang (the University of Technology), 100% students of honor engineers programs (HEP) graduated in time and have good career development. In particular, some of the students in the year of HEP stayed in the school and became lecturers. They all achieved master's degrees, and some got doctorate degrees (from studying abroad).

Assessment on income of the graduates from honor programs of the University of Information Technology, Assoc. Prof. Dr. Do Van Nhon said: "Many graduates from the honor programs are working in foreign enterprises or work abroad in Japan, Singapore, or the United States with quite high salaries."

According to Ms. Nguyen Ngoc Phuong Tien from VNG, VNG is employing more than 2,000 employees and 70% of their IT staff and more than 30% of the total staff graduated from honor programs of the University of Technology. "Students from the University of Technology, especially students from honor programs have very good background knowledge. They all adapt to the jobs well and make good progress everyday", she commented.

HCMC UNIVERSITY OF TECHNOLOGY'S RECEIVING THE 1ST CLASS LABOR ORDER

ON OCTOBER 27, THE UNIVERSITY OF TECHNOLOGY, VNU-HCM, CELEBRATE ITS 60TH ANNIVERSARY CEREMONY AND RECEIVE A 1ST CLASS LABOR ORDER

HCMUT's Rector Boardis receiving the First Class Labor Medal. Photo by ***Thai Viet***

Attending the ceremony were Mr. Truong Hoa Binh -Deputy Prime Minister, Mr. Nguyen Thien Nhan - Secretary of Ho Chi Minh City Party Committee, Mr. Phan Thanh Binh - Chairman of the National Assembly Committee for Culture, Education, Youth, and Children, Mr. Nguyen Thanh Phong - Chairman of HCMC People's Committee, Assoc. Prof. Dr. Huynh Thanh Dat - President of VNU-HCM, and other leaders, formers presidents, students, and alumni of the University of Technology..

25 international quality certifications

Speaking at the ceremony, Prof. Dr. Vu Dinh Thanh – Rector of The University of Technology (UT) said that the university has trained more than 80,000 engineers, 10,000 masters, and 200 doctors working throughout the country and in many other countries. In addition to the traditional programs, the University of Technology extends the training programs to honor programs and international collaboration programs. Students of these programs study entirely in English and receive a degree granted by a foreign partner university or a double degrees.

The quality management systems of the University of Technology are ISO 9001: 2008 certificated by the British Standards Institute (BSI), helping the UT be to one of the first four universities in Vietnam to receive the university-level certification accredited by the HCÉRES (in Europe) for the period 2017-2022. The University of Technology is also the first university in Vietnam to have two programs meetingthe ABET testing standards of the US's Technology Universities, 11 programs meetingthe AUN-QA standards, and 7 programs meeting the CTI standards of France and Europe. Last September, the University of Technology completed the university-level accreditation of AUN-QA (Southeast Asia). To date, the University of Technology has had 25 international quality certifications.

the University of Technology was also the first institution to apply the credit system in 1993. Nowadays, credit-based education has become a compulsory assessment criterion for universities.

Scientific research on the approach to international standards

Since the academic year 2016-2017, the University of Technology has launched 441 scientific research projects with a total budget of over VND 65 billion; and 707 scientific papers have been published, including 292 international papers and 415 national papers.

Technology transfer activities of the University of Technology are also increasingly improved in quantity and quality. the University of Technology is also responsible for many ministry-level and national-level research projects with wide ranges of application: VHF television chipsets, design and installation of medical

Impressive figures

UT was established in 1957. Its predecessor Phu Tho National Technical Center, consisting of four colleges: College of Civil Engineering, College of Electrical Engineering, College of Industrial Arts Engineering and Vietnam National College of Maritime Technology. In 1976, the university was renamed Ho Chi Minh City University of Technology. Since 1995, the University has been a member of VNU-HCM.

UT has 11 faculties and 10 centers for scientific research and technology transfer. It is home of more than 1,000 lecturers in 33 disciplines, 38 master programs, 30 doctoral programs, 15 honor undergraduate programs; and it has 70 foreign partner universities, 25 international quality certifications, 150 experimental workshops, and 5 national key laboratories.

environment treatment systems, development and design of wind engines, applications for semiconductor lasers, etc. In 2016 alone, the university'sturnover in technology transfer activities reached nearly VND 165 billion.

On behalf of the leadership of VNU-HCM, Assoc. Prof. Dr. Huynh Thanh Dat called for all the the University of Technology lecturers and students to continue using their talent, knowledge, passion for science, and learning desire to contribute to the process of development and integration. At the same time, he proposed that the University of Technology should strive to become a model of self-governing university and push its scientific research activities to approach international standards so that it can make more contributions to the community, Secretary of HCMC Party Committee Nguyen Thien Nhan expressed that the University of Technology is the pride of HCMC. "In addition to training achievements, we highly appreciate the achievements of the university in pioneering the incubator program for young officials and students over the past eight years. Up to now, this program has originated 30 enterprises, including 5 successful ones in the market."

Recognizing the achievements of the University of Technology, the President of Vietnam decided to award it with the 1st Class Labor Order. This is the second time that the university has received this noble Order.

HCMC People's Committee awarded an Emulation Flag to the UT, badges of honor to 11 individuals, and certificates of merit to its 9 divisions and 6 outstanding individuals.

HCMUT students and lecturers on the celebration of its 60th anniversary of establishment. Photo by ***Thai Viet***

University of Social Sciences and Humanities: "... A RELIABLE ADDRESS FOR TRAINING TALENTED PEOPLE... "

THOSE ARE VIETNAM'S VICE PRESIDENT DANG THI NGOC THINH'S WORDS AT THE 60TH ANNIVERSARY OF THE ESTABLISHMENT OF THE UNIVERSITY OF SOCIAL SCIENCES AND HUMANITIES (USSH) ON NOVEMBER 20TH, 2017.

A lot of alumni being leaders of the Party, State and HCMC were honored at the ceremony. From left to right: Former Secretary of the Municipal Party Committee Le Thanh Hai, Vietnam's Vice President Dang Thi Ngoc Thinh, Head of the Central Commission for Propaganda and Education Vo Van Thuong, Former President Truong Tan Sang, Standing Deputy Secretary Of The HCMC Party Committee Tat Thanh Cang.Photo by ***Phien An***

Many generations of officials, lecturers, and students through the periods: University of Letters - Ho Chi Minh University - University of Social Sciences and Humanities (USSH) returned to the university to rekindle their memory of this historic university.

Pioneer in new training programs

In his opening speech, Assoc. Prof. Dr. Vo Van Sen - President of the USSH, affirmed that in more than half a century of its existence, the USSH created many valuable principles and traditions of higher education, made great contributions in the history of modern Vietnam, and became an indispensable part of the history of Vietnam in general, and of Saigon - HCMC as well as of Vietnam's higher education in particular.

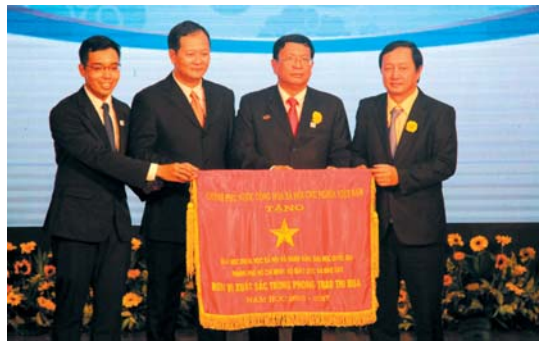
The President of the USSH shared that by 2017, the university was accredited for national standards in accordance with the circular on Regulation On Higher Education Accreditationby the Ministry of Education and Training. At the same time, 6 training programsat the USSH, namely Vietnamese Studies, English Linguistics and Literature, International Relations, Journalism-Communication, Literature, and Social Work, received AUN-QA accreditations.

"Today, in front of the diverse needs of learners, the university continues being the pioneer in establishing new research and training disciplines such as Oriental Studies, Anthropology, Vietnamese Studies, International Relations, Urban Studies, Korean Studies, Japanese Studies... Many of them have been first implemented in the USSH then adopted by other universities in Vietnam." Assoc. Prof. Dr. Vo Van Sen emphasized.

Speaking at the ceremony, Vietnam's Vice President Dang Thi Ngoc Thinh said that, under whatever names or circumstances, Vietnam's education, including the USSH, always successfully accomplishes its noble missions, contributing to the enhancement of intellectual standards of the Vietnamese and the quality of human resources, improvement of talents, and help the Vietnamese get closer to the human treasure of knowledge.

"In the process of building and developing our country, we always need a team of highly skilled, talented and dedicated people to serve the Motherland and the people. The USSH is one of

-Vietnam's Vice President Dang Thi Ngoc Thinh is donating VND 50 million VND to the USSH's scholarship fund. Photo by ***Phien An***



Assoc. Prof. Dr. Huynh Thanh Đat is presenting the Governmental Emulation Flag to Assoc. Prof. Dr. Vo Van Sen. Photo by ***Phien An***

the reliable addresses for training such people,"– Vietnam's Vice President said.

An important academic partner to the world

At the ceremony, the USSH received congratulation flowers and telegrams from many international partners. In particular, Prof. Edward J. Baker - Former Vice President of the Harvard-Yenching Institute (US), Prof. Osamu Nakayama - President of Reitaku University (Japan), and Prof. Kang Dong-oan - President of Chosun University (Korea) all delivered warm speeches to congratulating the USSH.

According to Professor Edward J. Baker, in the autumn of 1990, for the first time, Harvard-Yenching Institute invited four Vietnamese scholars, including two from the USSH, to visit Harvard. This event set forth the visits of 132 Vietnamese scholars to Harvard in following years. As for the USSH, up to now 21 scholars have participated in various programs of the Institute.

According to Prof. Osamu Nakayama, President of Reitaku University (Japan), the two universities have co-organized many international scientific conferences with the presence of various world-leading scholars, as well as many students exchange programs, academic programs and training for the faculty of Japanese Studies...

In particular, in 2015, the international conference"Cultures of Vietnam and Japan: Integration – Development" was organized by the universities to mark the establishment of the Center for Ethical Studies in USSH –Vietnam's first research institution in moral and ethical values.

Prof. Kang Dong-oan - President of Chosun University (South Korea) highly appreciated the cooperation between the two universities. In his opinion, since the signing the first exchange agreement in 2006, the two universities have maintained many important cooperation such as signing a mutual credit recognition agreement, implementing joint training programs (the so-called double-degree bachelor program) in 2014, and signing a cooperation agreement on student recruitment of Korean Language Center in 2016.

Based on this, Chosun University is going to build the first Vietnamese Language Center in Korea and send a group of volunteer scholars to teach Korean at the USSH in the winter term. In addition, from March 2018, USSH is going to send students to Chosun University.

The future belongs to young scientists

Prof. Huynh Nhu Phuong, one of the sixty outstanding alumnus of the USSH as well as the generation of graduates from the University of Letters, represented all the generations of students to deliver a memorial speech about the university where he has spent more than 45 years of his life.

In his belief in Vietnam's education history, few schools have been as much influenced by social changes as the USSH. The USSH lecturers and students have had to react to unusual circumstances and faced difficult choices in their lives.

"I believe that social sciences and humanities will help rebuilding the Vietnamese culture and people

- Assoc. Prof. Dr. Vo Van Sen is presenting flowers to Prof. Edward J. Baker. Photo by ***Phien An***

Prof. Huynh Nhu Phuong is delivering his speech on behalf of all the generations of USSH lecturers and students. Photo by ***Phien An***

USSH students' performance of the dance "Tự nguyện" - the USSH's traditional anthem. Photo by ***Phien An***

that have been hurt and injured in the past wars," Prof. Phuong said.

According to Prof. Huynh Nhu Phuong, over the course of 60 years, the USSH has become a confluence of essentials of philosophy, anthropology, history, and literature... that any nation with a desire to rise up in the five continents of the world need to acquire creatively.

"The future of the USSH no longer belongs to our generation but to those of young people who are teaching in here or on every places in Vietnam. They will continue sowing the seeds of ideals for social contribution, the seeds of culture, truth, love, and the spirit of national harmony on our land. They themselves are shouldering the mission that the university has sent to them: building a university to "pioneer in the development of academic freedom in social sciences and humanities, "shared Prof. Huynh Nhu Phuong.

Honor 60 outstanding alumni

The highlight of the 60th anniversary of the USSH's establishment is the ceremony honoring 60 outstanding alumni through its three periods: University of Letters – Ho Chi Minh University – University of Social Sciences & Humanities in four fields: science - education, politics - society, economy, and culture - arts. Among them, many alumni are leaders of the Communist Party of Vietnam, State, and HCMC such as Former President Truong Tan Sang, Head of the Central Commission for Propaganda and Education Vo Van Thuong, Vice President Dang Thi Ngoc Thinh, Former Secretary of the municipal Party Committee Le Thanh Hai, Standing Deputy Secretary Of The HCMC Party Committee Tat Thanh Cang, etc.

At the ceremony, Vietnam's Vice President Dang Thi Ngoc Thinh donated 50 million VND to the USSH'sscholarship fund. Assoc. Prof. Dr. Huynh Thanh Dat - VNU-HCM President presented a Governmental Emulation Flag to the USSH and a Certificate of Merit of VNU-HCM to its affiliated faculties and divisions.

VNU-HCM UNIVERSITY OF ECONOMICS AND LAW'S ACTIVE PARTICIPATION IN PROJECTS TO PROMOTE DOMESTIC CONSUMPTION DEMAND AND IMPROVE MATERIAL FACILITIES

ON OCTOBER 2ND, 2017, VNU-HCM UNIVERSITY OF ECONOMICS AND LAW (UEL) HELD AN OPENING CEREMONY OF THE NEW ECONOMICS AND LAW BLOCK B1 (ELB-B1) AND THE FOOTBRIDGE IN FRONT OF THE UNIVERSITY TO IMPROVE THE QUALITY OF TRAINING AND FACILITATE CONVENIENT TRANSPORTATION IN VNU-HCM CITY.

*The ELB-B1 of VNU-HCM UEL. Photo by **MC***

*The delegates in the ribbon-cutting ceremony of the ELB-B1. Photo by **MC***

*Students on the footbridge in front of VNU-HCMUEL. Photo by **MC***

The ELB-B1 was put into use from the beginning of the 2017-2018 academic year, consisting of 6 floors with 28 rooms. The classrooms are equipped with a central air conditioning system, modern flexible furniture to meet the needs of modern teaching methods of high quality training programs.

Mr. Nguyen Thanh Phong, Chairman of HCMC People's Committee, applauded VNU-HCM UEL for its active participation in domestic consumption demand program with the construction of the ELB-B1, and coordinating with city department of transportation to build the pedestrian overpass, ensuring safety and convenience transportation for students to school.

With the same view, Assoc. Prof. Dr. Huynh Thanh Dat - VNU-HCM President said: "The ELB-B1 with modern facilities and devices will contribute to improve the quality of teaching and learning, step by step completing the construction of the UEL in accordance with the approved plan."

Crossing the footbridge every day to go to school, Nguyen Quynh To Uyen, a junior student of the Faculty of Foreign Economic Relations, said: "Before the footbridge was built, it had been very hard to cross the road with so many fast running trucks. There were also so many pedestrians that I couldn't see the way ahead. Now thanks to the footbridge, I can cross the road much faster and safer."

Assoc. Prof. Dr. Nguyen Tien Dung – EUL Rector shared: "In the previous academic year, the construction of university facilities had remarkable results thanks to the efforts of the university and the supportof the leaders of Ho Chi Minh City and VNU-HCM in the context of the modest state investment." The Rector of this 17-year-old university was delighted when the construction works were put into use right at the start of the new academic year.

20 years of the establishment of VNU-HCM Defense Education Center:

AN ENVIRONMENTFOR TRAINING STUDENTS WITH ETHICS AND SKILLS

Mr. Trinh Tan Hoai –DEC Director. Photo by ***the DEC***

ON THE OCCASION OF THE 20TH ANNIVERSARY OF THE FOUNDING OF THE VNU-HCM DEFENSE EDUCATION CENTER (DEC), THE DIRECTOR OF THE CENTER RECALLED THE JOURNEY AND SAID THAT IT WAS A PERIOD OF 20 PRIDEFUL YEARS, AND A SOLID FOUNDATION FOR THE CENTER TO CONTINUE ITS DEVELOPMENT.

**** Looking back on the 20 years of development, what do you think the achievements of DEC are?***

- The DEC was established under Decision No. 225 / QD-ĐHQG-TCCB, dated July 21, 1997 by the VNU-HCM President with the mission of defense education for the students of VNU-HCM member universities and others in HCMC as assigned by the MOET.

Over the past 20 years, the Center has maintained a leading position in teaching defense education and scientific research in the field of defense education.

The Center is the only training center in the defense education network throughout the nation to fully provide teaching and training facilities, and boarding education for 100% of students of VNU-HCM member universities. The financial resources of the center have been strongly developed, demonstrating its sustainability and growing independence from the state budget, and being in line with the state policy on incentive policies on private sector involvement in education.

Being tied to the Center for the past two terms, I feel that the 20th anniversary of the DEC's establishment is a special day for all the officials and staff to look backat the establishment and growth of the Center. The DEC has had a solid foundation to reap more future success.

**** What is your view on the current role of the Center in defense education for students?***

A corner of the DEC. Photo by ***the DEC***

DEC students on the training field. Photo by ***the DEC***

- The DEC's mission is to equip students with the basic knowledge of national defense and security to promote the spirit of patriotism, socialism, the tradition of building and defending the country, nationalism, and raise students' awareness responsibility in protecting the Socialist Republic of Vietnam.

Here, activities are organized for students to study, train and practice the military lifestyle to become well-rounded students with "both ethics and skills". It is really a mission that only few education institutions can accomplish.

At the DEC, the teaching and administrative staff always actively participate in scientific research, academic activities, and teaching demonstrations; and regularly organize news reading and other extracurricular activities, which are appropriate and politically-educational for students.

**** What is the DEC's future strategy of development, sir?***

- In the coming time, the DEC will build more facilities to meet the requirement of 45,000 students per year.

At the same time, the DEC focuses on improving the quality of training and scientific research in order to maintain its position as the leading center in scale and defense education training quality in the network of defense education centers in the country.

In addition, the DEC is going to build a streamlined and efficient organizational structure with a human resource capable of fulfilling their duties in accordance with the law.

To ensure financial resources for development, the DEC is going to develop an appropriate financial autonomy, increasing and diversifying financial resources.

The mentioned aims to build an image of a smart, high quality, professional, and friendly center.

Assoc. Prof. Dr. Huynh Thanh Dat –VNU-HCM President states: Investment in the DEC is investment in the future development.

The DEC plays an important role in shaping the students' sense of responsibility for building and defending the Socialist Republic of Vietnam, helping them become useful citizen after graduation.

VNU-HCM leaders always consider investment in the DEC as one for future development. At present, the DEC has good facilities andan appropriate location to meet the basic requirements of teaching, studying as well as students' boarding and training needs. However, in order to meet the requirements of defense education courses in the new context, the DEC still needs the Party and the State's investment in the development of facilities, curricula, and human resources.

Prof. PHAN THANH SON NAM receiving Ta Quang Buu Award

OVERCOMING 30 SCIENTISTS' APPLICATIONS IN THE COUNTRY, PROF. PHAN THANH SON NAM - VNU-HCM UNIVERSITY OF TECHNOLOGY WAS ONE OF THE TWO EXCELLENT SCIENTISTS HONORED BY THE NATIONAL SCIENCE AND TECHNOLOGY DEVELOPMENT FUND WITH TẠ QUANG BỬU AWARD IN CHEMISTRY OM MAY 6TH.

Prof. Phan Thanh Son Nam (second from the right) receives Ta Quang Buu Award 2017. Photo by ***Nafosted***

Prof. Phan Thanh Son Nam is the lead author of the research: Propargylamine synthesis via sequential methylation and C-H functionalization of N-methylanilines and terminal alkynes under metal-organic-framework Cu2(BDC)2(DABCO) catalysis published in the Journal of Catalysis in 2014 (Vol. 319, 258-264). It focuses on the use of organic - metal frame materials as a catalyst in the reaction to produce propargylamine compounds by direct activation of carbon - hydrogen bonding. Compounds containing propargylamine have many important applications in the field of pharmaceutical chemistry, agrochemicals, and functional materials.

In particular, the work of the research team led by Prof. Phan Thanh Son Nam was conducted entirely in Vietnam with Vietnamese collaborators. The scientific article which leads to this award is highly appreciated by international experts and cited 21 times.

At the awards ceremony on May 18, Prof. Phan Thanh Son Nam thanked the support from the colleagues, scientific management units, and scientific community for their hard work to promote scientific research in Vietnam, creating opportunities for scientists to fulfill their passion to science right in their own country.

According to Deputy Prime Minister Vu Duc Dam, there were many encouraging improvements in the field of science and technology in the year. This is shown at the Ta Quang Buu Award Ceremony in 2017 with the appearance of more young faces, part-time researchers, startup community representatives, and especially the enterprises.

Minister of Ministry of Science and Technology Chu Ngoc Anh congratulated and honored the two winners of the year with two excellent research projects. "Fundamentalresearch is an important element in maintaining a high quality research environment and a vital factor in helping Vietnam build a scientific force that can contribute to economic development of the country."

Prof. Phan Thanh Son Nam is currently Dean of the Faculty of Chemical Engineering, the University of Technology. In 2015, he became the youngest professor in Vietnam at the age of 36. Since 2010, Prof. Phan Thanh Son Nam and the research team of the University of Technology have published 48 scientific papers in ISI journals.

The Prestigious Award for Vietnamese scientists

Established in 2013, Ta Quang Buu Award is an annual award organized by the Ministry of Science and Technology to encourage and honor outstanding scientists in fundamental research, contributing to the integration and development of science and technology in Vietnam.

In 2014, 2015 and 2016, Ta Quang Buu Award was given to seven scientists being authors of outstanding scientific researches in the fields of mathematics, physics, Information Technology and Computer Science, Earth and environment sciences, and two young scientists in the field of mathematics and physics.

Prof. Nguyen Kim Phi Phung - 40 YEARS OF DEDICATION AND CREATIVITY

Prof. Nguyen Kim Phi Phung. Photo by ***Minh Chau***

ON MARCH 7TH, PROF. NGUYEN KIM PHI PHUNG, LECTURER OF THE DEPARTMENT OF ORGANIC CHEMISTRY, FACULTY OF CHEMISTRY, VNU-HCM UNIVERSITY OF SCIENCE, WAS HONORED WITH THE KOVALEVSKAIA AWARD FOR HER EXCELLENT CONTRIBUTIONS TO THE DEVELOPMENT OF SCIENCE AND TECHNOLOGY IN VIETNAM.

In 2016, Prof. NGUYEN KIM PHI PHUNG was the only individual to receive this award.

Born to be a teacher

After graduation in 1977, Nguyen Kim Phi Phung was recruited by the university as a lecturer so she stated"I wasn't the one that choose the career but it was the career that chose me.". However, she proves to be a person born to be a teacher. The evidence is that after 40 years - a lifetime of dedication - she still shuttles between home and school, and still remains with her students, lecture theaters, and laboratories.

Among chemistry departments, Mrs. Phung chose the organic chemistry. This led to many years of research into the chemical composition of plant species or lichens in Vietnam, especially those that have not been studied or only preliminary studied by science. She found many natural compounds that can effectively inhibit the development of human cancer cells such as cervical cancer, breast cancer, lung cancer, or enzymes related to diabetes, skin pigmentation, Alzheimer, etc.

The results of her research enriched the encyclopedia of Vietnamese medicinal plants and provided data for scientists who want to study natural resources to contribute to pharmaceutical industry in Vietnam and the world.

At the age of 62, Prof. Nguyen Kim Phi Phung has got remarkable scientific achievements: she led and participated in 11 research projects at different levels, published 144 articles in chemistry journals, and 7 textbooks for undergraduate and graduate programs. In education, students under her instruction successfully defended 8 PhD dissertations, 69 master theses, and 150 bachelor's theses.

"Put your hand to the plough"

All of Mrs. Phung's students remember the proverb "Put your hand to the plough" – the cliché of this Southern lady. Dr. Ton That Quang - Deputy Director of the Department of Organic Chemistry said: "To encourage the students to overcome difficulties in scientific research, Mrs. Phung often says 'Such is Chemistry. You should study and put it into practice for real results. You should 'put your hand to the plough'."

Dinh Minh Van, a graduate student of the Department of Organic Chemistry, University of Science, shared: "I have been her students since the sophomore year. No matter it is a crowded general class or a small class, she always 'runs' around the class to check every student during her lecture. In a laboratory with as many as 50 students, she does not only know each of them well but also what they are doing and their progress to check and push them constantly.

"The lab does not always have enough equipment and chemicals, so sometimes we cannot finish our jobs. She then asks us to look for other substitutions, borrow, beg, or do whateverwe can. She said 'The device can be designed in this way' and then demonstrated it at once. Not only did we acquire useful knowledge from her, we also learned her enthusiasm, diligence and tireless in research." - added Dinh Minh Van.

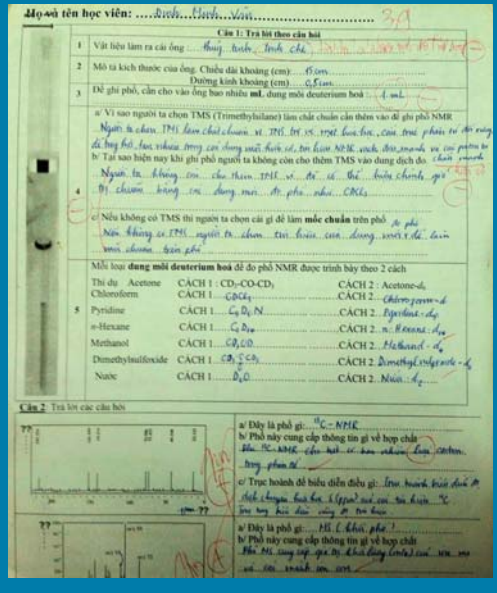
Prof. Nguyen Kim Phi Phung comes to each desk to instruct the students in the classroom. Photo by ***Minh Chau***

A quiz test every day

In every class, she gives students a short quiz. In an average class with 45 periods, each student must do 11 quizzes for 11 score itemsas the attendance score. "These quizzes are carefully graded with a minus comment on every error we make to help us remember. The class is crowded but she gives us exercises every day. Sometimes I think she is really a... superhuman" - Dinh Minh Van stated with a smile.

Seeing her often bring jobs home, her husband compassionately teased her as "Foolish Phung", but she still continues. Because, "short quizzes in class is an effective way to help students quickly grasp the concepts. Through their answers, I can tell how much they have learned, and their strengths or weaknesses. This also helps me identify good students for early fostering and intensive training"- she explained.

Thanks to this training method, she understands each student. When recommending students to scholarship programs, she always gives them meticulously detailed comments, increasing the scholarship granter's trust and the students' chance.



A short exercise with a 4-point-grade-scale is being corrected by Prof. Nguyen Kim Phi Phung. Photo by ***MV***

Not only monitoring the students, she also "keeps a close eye" on the faculty dean, deputy deans who used to be her students, reminding them to do research or write papers for scientific conferences and journals. She said with a strong belief"I have to remind them so that the administrative officials do not neglect their scientific research."

She added: "I am already 62 years old, about the age to retire, so I only participate, not lead the research projects anymore. I participate so as to stay by their sides, support them in their researches." Then she compared herself to an old bamboo tree in a bamboo grove with many high-rise ones and numerous young shoots. Making the comparison, her eyes shone with a blissful joy and a firm belief in the future of younger generations.

PGS.TS Lê Thị Kim Phụng

Assoc. Prof. Dr. Le Thi Kim Phung: RESEARCH TO NONSTOP REFRESH ONESELF

WITH A LOT OF RESEARCHES ON BIOFUELS PRODUCED FROM AGRICULTURAL WASTE SUCH AS RUBBER OIL, COFFEE BEANS, ASSOC. PROF. DR. LE THI KIM PHUNG – VICE-DEAN OF THE CHEMICAL ENGINEERING DEPARTMENT, VNU-HCM UNIVERSITY OF TECHNOLOGY (UT) WAS SELECTED AS ONE OF THE TOP 100 LEADING SCIENTISTS IN ASIA IN 2017.

The desire in research

Born and raised in Hue, from an agricultural family, Assoc. Prof. Dr. Le Thi Kim Phung always wanted to "do something related to farmers and agriculture". That is why she, on her return to University of Technology, chose to research on applications of renewable energy and biomass biomass, i.e. transforming agricultural waste to energy and useful materials.

In 1994, Mrs. Phung was successfully admitted into the University of Technology. It was a surprise to people because technical universities were believed for male students due to their prominent characteristics for technical careers. However, during her undergraduate years, Mrs. Phung demonstrated that this viewpoint was just temporary prejudice with a series of her remarkable achievements such as winning the Gold medal of the Faculty of Chemical Engineering, graduating with the honor rank, and then being invited to remain as a lecturer of the university.

It was thought that teaching was her fate, but she surprised her teachers and colleagues with the decision one leaving the university to work for a company. Mrs. Phung disclosed: " At that time, my parents were farmers and I had to take care my two siblings, but the salary of a lecturer was too low. Then, I had to temporarily "fly away" to earn a better living. Moreover, I had sufficient background knowledge but was in lack of practice. I really desired to apply the university knowledge into reality to gain more experiment and more matured."

Working for a few companies within one year, she worked as head of the technical department and had opportunities to promote, but she fell into a state of "working too leisurely". Therefore, she returned to the UT to study a master program and focused on doing intensive research. "While I was working at the company, I had to wait for a long time to get a chance to repair a machine. Thus, I decided to go back to research and gain access to new technology." shared Mrs. Phung.

In 2004, Phung passed the entrance exam of postgraduate at the University of Sheffield (UK) and four years later, she successfully defended her Ph.D.

Women in science have many opportunities.

As soon as she returned to Vietnam, Mrs. Phung did research on biofuels from agricultural waste. This direction was not totally a new one but most of Vietnamese scientists did not choose this field.

Two female scientists VNU-HCM honored in the Asian Scientist

The Asian Scientist is a Singaporean journal published online since 2011, and in print since 2014. This is the second year the journal has published the list of 100 prominent Asian scientists.

Within two years in a row, VNU-HCM had female scientists honored in the *Asian Scientist: In 2016 Dr. Tran Ha Lien Phuong (the International University) and in 2017, Assoc. Prof. Dr. Le Thi Kim Phung (the University of Technology).*

On the other hand, Vietnam has increasingly produced agriculture waste. Therefore, her research promised to solve the problem of environment, economy, and sustainable development.

Any applied research requires working on-site and "rolling in" practice. Phung said: "I had to travel for work frequently, contacted with the local people and factories, went to the farms and observe others in foreign countries." Being aware that this is a big disadvantage for her children and family, she believes that it is also a way to sharp the family members' good habits of caring and loving each other.

The efforts and sacrifices of Assoc. Prof. Dr. Le Thi Kim Phung have gradually flourished over years. Since 2009 has she published 24 international scientific articles. Moreover, she is such a good and dedicated teacher that many students admire her. Nguyen Hanh (a UT alumni) shared: "Mrs. Phung is very fond of students and I admire her not only in class but also in her way of being sincere. I feel fortunate to be her student." Phan Quoc Hong An (a student of Intake K15, the Faculty of Chemical Engineering) confided: "With her devotion and enthusiasm, Mrs. Phung always inspires and helps her students to chase their passion for learning and researching".

Assoc. Prof. Le Thi Kim Phung devotes a lot of favor and encouragement to her female students: "Women in science have many opportunities so there is no problem for you to hesitate. We try to work hard and give pursuit; the sweet success will surely come." She agreed to answer a reporter's interview, not because she wanted to be famous but the reason was simple and lovely. She said: "When I appear in a newspaper, then other women know my stories, I can indirectly inspire them and motivate them to do science research and keep moving forward in their life."

Assoc. Prof. Dr. Le Thi Kim Phung taken photos with her students. Photo by ***NVCC***

Dr. Nguyen Thi Hiep - A YOUNG TALENTED VIETNAMESE

Dr. Nguyen Thi Hiep is working at the Laboratory of the Department of Biomedical Engineering. Photo by ***Minh Chau***

ON OCTOBER 19TH, IN NAY PYI TAW CITY, MYANMAR, DR. NGUYEN THI HIEP, A LECTURER OF THE BIOMEDICAL ENGINEERING DEPARTMENT OF VNU-HCM INTERNATIONAL UNIVERSITY WON THE FIRST PRIZE OF THE 3RD ASEAN- US SCIENCE PRIZE FOR WOMEN IN 2017. SHE WAS THE FIRST VIETNAMESE WOMAN TO WIN THE PRIZE.

After returning from Myanmar, with the witness of Ministers and senior officials in ASEAN, Dr. Hiep could not hide her happiness through her sleepless eyes because she has had "the mission completed" - for Vietnam to be honored the highest honor prize in science and technology in the region.

"I was given a mission."

Dr. Nguyen Thi Hiep, who was the only representative of Vietnam and also one of the two young ASEAN scientists, passed many other candidates to reach the final round of the contest. Flying to Myanmar with her husband, the 36-year-old female lecturer understood that she had to try her best, but she was still "overwhelmed" when the Malaysia competitor was well-prepared. "On my arrival, I saw the Malaysian competitor was monumentally welcomed by the Malaysian Ministry of Science and Technology. They invited reporters, gave flags and everything else so that they could report immediately if she won. At that time, I realized that the competition was not about my reputation but I also took a responsibility for my country dignity, then I felt disquiet. The night before my presentation, I stayed up late all night to check the slides carefully before I submitted them to the council. Then, after hearing the result, I was so happy. I really completed my mission and ... so I could not sleep that night" Dr. Hiep said.

With the first prize, Dr. Nguyen Thi Hiep was awarded $ 20,000 for her excellent research on home health care as the solution to reduce the pressure on urban health care systems. She said: "The migration from rural to urban areas have put great pressure on health care services in major cities. Biomedical facilities can take care people at their home. My research focuses on biological materials such as bio-glue and first-kits stools without needles. They can be easily used to make first-aid more effectively."

My family is my motivation for effective work.

Dr. Nguyen Thi Hiep graduated with a bachelor degree in chemistry from the University of Science, VNU-HCM. She received her master and doctorate degrees from Soonchunhyang University (Korea). In 2012, Dr. Hiep returned to Vietnam and worked as a lecturer in the Department of Biomedical Engineering at the International University.

Just at the age of 36 years old, this Saigon female lecturer has had over 10 years of research on medical materials and their interaction with cells and tissues. Up to now, Dr. Hiep has had 26 ISI scientific journals, 6 international journals, 6 national journals, more than 40 articles in international conference proceedings, and four inventions.

In 2016, she announced a new research used Titanium in restoration dentistry, and won the

L'Oreal Prize. The UNESCO L'Oreal Science Awards evaluated her high capacity, excellent research ability, dedicated to scientific research and rich experience in designing biological materials.

In order to have time for her academic career, Dr. Hiep has to make good arrangements between her job and her family. "Every morning, I wake up, help my two daughters to do their personal hygiene, and then my husband and I take them to school. Then we have breakfast, talk about our plans for the day. I focus on my job at the university but after going back home, I take care my family. Besides work, I want to spend time on my family and my children".

"Any woman who really wants to do scientific research needs be strong and patient in mind. Especially, while she is still single, she should try to do valuable research as much as possible. It's because this award assesses the whole her research process, not on a specific field," Dr. Hiep shared.

Being a female scientist model for students

We talked to Dr. Hiep when she was attending the graduation ceremony at the university. Sometimes, she turned to the back seats to look for the students and chuckled her tongue, "My students are about to graduate, I am gonna miss them". Sometimes, she immediately phoned some students to ask why they did not go to the meeting on Saturday. Then, she reminded them to be well-prepared for their upcoming exams.

Dr. Nguyen Thi Hiep (in a traditional dress) at the evening award ceremony of the 2017Asean – US Science Prize. Photo by ***NVCC***

Nguyen Thi Phuong Nghi, a student of the intake K13, the Department of Biomedical Engineering said: "Dr. Hiep is my idol and the female scientist that I really want to be. I was one of her student in the first course at the university. I witnessed the process of the formation and construction of her laboratory for regenerative medicine. When my friends and I first came to meet her for science projects, we sat in an empty room. Now, the Department of Rehabilitation Medicine has had three laboratories with modern facilities useful for students and teachers' research, and even for other laboratories as well. Her research team now also has more than 40 undergraduate and postgraduate students with diverse research projects."

Commenting on his younger colleague, Prof. Vo Van Toi, Dean of the Department of Biomedical Engineering at the International University, said: "Dr. Hiep is an outstanding example of young Vietnamese. They are talent and dedicate. In basic conditions, they can develop their potentials. In previous years, winners were professors and directors of research institutes, and even this year her competitor was a professor. They were surely supported and taken more advantages. Meanwhile, Dr. Hiep is a normal teacher working in limited conditions and then she has got the best prize. We are proud of her; and her achievement is something to be carefully considered."

"I am fortunate to work at the International University, a place to provide me more advantageous conditions comparing with those for other colleagues in Vietnam. Now I try to work, do research, take the new opportunities, and support my students. Fortunately, the Department's labs are open 24 hours a day, 7 days a week so students can do their study at any time," said the young scientist.

The 2017 ASEAN - US Science Prize

The ASEAN-US Science Prize is one of the US initiatives to support ASEAN and its 10 member countries. The United States has cooperated with ASEAN to support economic integration, expand maritime cooperation, promote future leadership, increase opportunities for women, and address transnational challenges.

ON MAY 19th, IN HANOI, AFTER FOUR SECTIONS OF THE COMPETITION ABOUT THEORETICAL AND PRACTICAL KNOWLEDGE, INCLUDING PRESENTATIONS, THE TEAM OF THE UNIVERSITY OF SCIENCE (US), THE REPRESENTATIVE OF HO CHI MINH CITY, BECAME THE EXCELLENT ONE AND WAS AWARDED THE FIRST PRIZE IN THE 2ND NATIONAL OLYMPIC COMPETITION OF PHILOSOPHY OF MARXISM AND LENINISM AND HO CHI MINH 'S THOUGHT - "THE GUIDING LIGHT" IN 2017.

All the five members - Le Kha Han, Tran Quoc Thinh, Dao Thi Hong Thu, Nguyen Thi Minh Thi, and Le Xuan Hau have not hidden their passion on their talk about these science subjects as well as the teams' hard working during the competition.

Be "paid more attention" thanks to awards

Leader Le Kha Han shared, "If Dao Thi Hong Thu won the Third Prize in the competition "Pride of Vietnamese History", Tran Quoc Thinh won the First Prize of the competition "Ho Chi Minh – Ever Lightening Name" and

The team of the University of Science is presenting in the final round. Photo by ***Vu Linh***

the Third Prize of "The Through-Century Vision", and Nguyen Thi Minh Thi won the Second Prize in "The Guiding Light". They were prominent students in the university-level and city-level competitions. Therefore, the Youth Union did "pay much attention on" and set them up into a team. All the members share the same interest in Philosophy of Marxism-Leninism and Ho Chi Minh's Thought."

Even though the senior students in the team were busy with tehir theses or experiments, they spent a lot time on further studyevery day. Not only they had self-study at home, but also met twice a week for review. "In the begining, we did so. Then we went to school every day from 8 am to 8 pm for practice," said Nguyen Thi Minh Thi.

Students of the University of Sciences Champion of the contest

"THE GUIDING LIGHT"

The team of the University of Science is receiving the First Prize. Photo by ***Vu Linh***

The students of the University of Science are joining the team to honor their victory. Photo by ***Vu Linh***

These subjects are not boring at all.

Le Kha Han opined: "When studying Philosophy of Marxism-Leninism, and Ho Chi Minh's thought, I found that these subjects were not boring at all, especially when we applied these theories to understand more about real life."

"Our key strategy is to learn the basic knowledge, i.e. learning things in each chapter in order to grasp the main ideas and then the details later. We apply theories into practice and that is the best way to understand main points. Then, sharing the information with each other is the best way to check it and also remember it longer," said the team leader.

After three months of "learning day and night long"for the competition, the team members of the University of Sciences understood and trusted each other more and more. According to Nguyen Thi Minh Thi, the most important learning outcome was: "The competition has given us the opportunity to better understand the subjects which are often believed to be more appropriate to the social majors than science majors. We have a holistic point of view, understand more about the dialectical materialism worldview and the method of dialectical work, andhave fuller and deeper feelings about life. "

TOWARDS THE FUTURE

CHALLENGES FOR VNU-HCM ON THE ROAD TO THE 100 TOP UNIVERSITIES IN ASIA

IN THE MEETING WITH THE KEY OFFICERS OF VNU-HCM ON NOVEMBER 20TH, 2016, THE PRIME MINISTER NGUYEN XUAN PHUC DELEGATED THAT VNU-HCM HAD TO STRIVE TO BE ON THE 100 TOP BEST UNIVERSITY LIST IN ASIA. THEREFORE, VNU-HCM HAS DEVELOPEDA PROJECT TO ENHANCE THEIR POSITIONIN THE UNIVERSITY RANKING WITH THE QS ASIA STANDARD AND A PROJECT TO ENCREASE F INCREASING THE INTERNATIONAL SCIENCE PUBLICATION AT VNU-HCM IN THE PERIOD 2017-2022.

Assoc. Prof. Nguyen Tan Phat
Former President of VNU-HCM

The strategic determination is extremely great, but to achieve the goals, VNU-HCM needs overcome numerous challenges and have a reasonable action plan and motto.

Challenges from many sides

First of all, the Asian education shape and quality are quite different from those in the past. At present, in Asia thousands of universities and colleges have been established with hundreds of years of history and reputation all over the world. Meanwhile, VNU-HCM has been established and run for more than 20 years. Among its members, the oldest universities have just celebrated their 60th anniversary; and the other are even younger. From this reality, it is not easy for VNU-HCM to strive to become one of the 100 top universities in Asia by 2020.

Next is the ranking system that VNU-HCM has participated in. It consists of QS Asia criteria, including 4 groups of issues with 10 core criteria; and some very important criteria are enterprises cooperation, research achievement, application of science and technology, internationalization level, and many other values suitable for the development of Viet Nam's universities. To meet these criteria, all the universities in the rankings need long time for accumultion, and VNU-HCM is not an exception.

And then a question is whether the speed of rankings is appropriate with Vietnam's context? A reflect on the following statistics shows: In 2009, in the QS Asia rankings, VNU-HCM was in the top 201 – 250, the top 191-200 in 2014, and the 150th in 2016, and the 142nd in 2017. That is a spectacular starting – withing eight years, VNU-HCM has lifted up nearly 100 steps! However, there is not much time to VNU-HCM strive to exceed 42 steps, being in the 100 top universities of Asia in the period 2020-2025. In the coming time, none of the universities are going to stand still or step back to make way for VNU-HCM. Then the lower ranked universities are not going to halt, but ready to rise to higher positions than that of VNU-HCM. It is a hard reality!

Need of a practical and feasible solution

Objectively identifying challenges does not mean pessimismand retrogression but helps focus on planning and seeking practical solutions and potential strategies.

On the implementation of the plan and strategies to raise the rankings in the international accreditation, VNU-HCM should pay special attention to the relations among the following domains:

First is the relation between "clinging" and "giving up". the viewpoint of striving to reach the 100 top universities in Asia made everyone excited, but only after a few years, they realized it was not an easy goal. As a result, there appeared to face "the mountain" or the "drumbeat", i.e. in the beginning of their term, they were very eager, and in the ending of their term, they gave up; the former teams were determined but the latter ones felt bored. Whereas the project nearly run to the end, the energy consumption should increase by 5 or 10 times, even just for one higher step. "Clinging to the end" is is the actionmotto to win all difficulties.

Second is the relationship between the in-depth and the in-width development. Naturally, the in-width developmentth is easier. Lecturers can increase their teaching time to hundreds or thousands periods for extra money; and the department can open new branches to attract learners, etc. Consequently, the sweet results are consumed totally, but the bitter results leave effects in the long term, for examples, the unbalance between tenure lectures and students, between the high qualified lecturers and faculty members, and the scientific research publications in the international journals, etc. The in-depth development must be the first priority in the VNU-HCM system in the future.

Third is the relation between consistency and flexibility. We started the game with a plan which did not count all the situations, opportunities as well as emerging challenges. For example, we did not predict that Vietnam's Congress issued resolutions on allowing HCMC to develop four special mechanism groups. For that reason, we need to predict and be active to the minimum conditions to catch up with opportunities and limit challenges to achieve the strategic goals.

Fourth is the relation between high autonomy and rational coordination. In order to raise the motivation to complete the strategic plan, it is necessary to focus on well-develop member universities, i.e. the traction of trains, expand their legal autonomy in line with the national law, and provide maximum support to give more power to the strongest trains. At the same time, the plan needs to strengthen the other slower ones, to regulate theirspeed and allocate rational resources to the sustainable development, not resulting inflexible distribution for the whole system as well as individual member universities and affiliated organizations.

VNU-HCM has got discussion on programs and solutions to create a sustainable spring of VNU-HCM, also the happiness of its members. Andwhether happiness comes quickly or slowly depends much on the efforts of each individual as well as the whole VNU-HCM system. The door has opened and time has come. These are just a suggestion, a contribution to the plan, and also a solution for the spring to come soon.

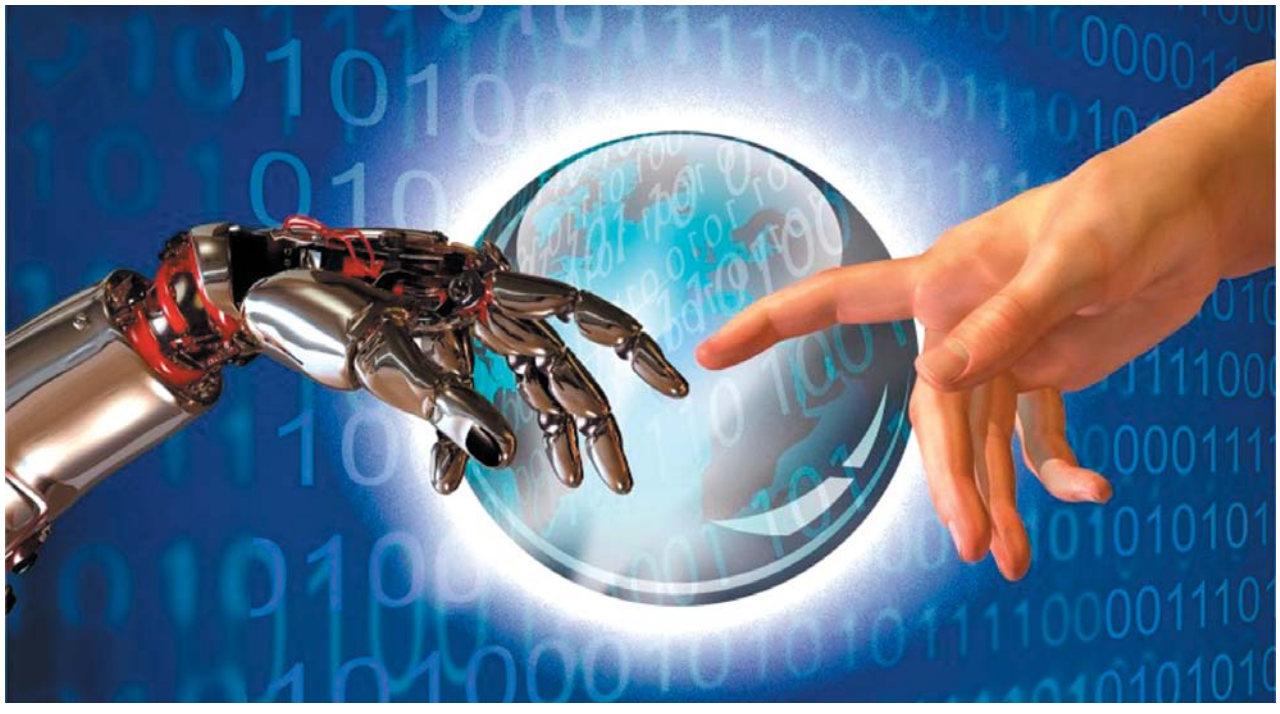
THE ADAPTATION OF VNU-HCM'S TRAINING IN THE INDUSTRIAL REVOLUTION 4.0

ASSOC. PROF **ĐINH ĐUC ANH VU**
(Department of Undergraduate, VNU-HCM)

I. An overview of the industrial revolution 4.0

The concept of "the industrial revolution 4.0"(the IR 4.0) was first mentioned and aslo the chosen theme of the 46th Economic Forum held on January 1st, 2016 in Davos-Klosters city, Switzerland. However, the impact of the IR 4.0 really began its "footprint", especially in the developed countries in the late 20th and the early 21st centuries. Unlike previous revolutions, the IR 4.0 is not associated with a specific technology but convergence of various technologies. These are nanotechnology, biotechnology, and social network. The valid evidence for its convergence and revolutionary progresse is reflected in the ambitious project called NEURALINK.

The project is funded by an American billionaire. It connects the human brain to the computer to create a super-intellect going beyond human



intelligence. The futurist, entrepreneur and writer, Raymond Kurzweil predicts that by 2030 Nano scale robots transplanted into the human brain will create the power of God in human. If Raymond Kurzweil's prediction is correct and if Elon Musk's NEURALINK project is successful, then the human perspective "dominated" by the robot is at risk of coming true and it means that the advance of technology is not used properly.

The nature of the IR 4.0 is the formation of a digital world, which is a lively reflection and co-exists with the physical world. The connection between the physical world and the digital world creates "revolutionary" effects in all aspects of human's economic, political, cultural and social life. Today's digitization not only enhances the performance of businesses but also changes their business models fundamentally. In the era of the IR 4.0, globalization becomes more profound, the changes take place in a greater scope with an unpredictably higher intensity and speed; and the key industries are reshaped to serve human needs for the sake of human and their pursuit of happiness. In particular, "standardization" will be replaced with "personalization" in the era of the IR 4.0. In the manufacturing industry, technological advances, especially the 3D printing technology, lead to the feasiblity of the mass production in small and single amounts at the request of individual customers or groups of customers. Similarly, in the field of education, the common education methods are replaced with personalized learning thanks to the advances of information and communication technology.

II. Opportunities and challenges in the IR 4.0

At the macro level, successfully application of the IR 4.0 invention helps improve labor productivity, and promote the economic, society, and life quality. At the micro level, the IR 4.0 leads to a reshaping of the industries and services, and thus opens opportunities for Vietnamese enterprises to "step in" the global supply chains of new industries and services. Understanding the opportunities in the IR 4.0 can help Vietnam narrow the gap and even catch up with developed economies in the region and in the world.

To actively grasp the opportunities of the IR 4.0, the Prime Minister issued the Directive, No. 16 / CT-TTg dated May 4th, 2017 on enhancing the access to the IR 4.0. One day later, the Minister of Education and Training issued the Official Letter, No. 1891 / BGDDT-GDĐH to universities and colleges about the mission of training human resources to adapt the IR 4.0.

III. Challenges for education and training

The benefits of the IR 4.0 are tremendous, and it positively affects all aspects of human life. Education is more affected than others because education itself produces new versions of the next industrial revolution. The IR 4.0 promises to make breakthroughs in education, change training objectives and traditional training models by its completely new transfer and provision of knowledge. The development of information technology, digital tools, networking, and metadata is to provide useful tools and means for changes in organization and teaching methods. Traditional classes with limitations such as high organizational costs, and limited spaces which are, unfavorable for many learners, etc. will be replaced with online and virtual classes.

The quality of online training is easily controlled by the support tools such as the sensors and the Cybernet connection. Once learning spaces are diverse, instead of traditional labs or simulation rooms, learners can experiment a learning cyber-space and interact with the real world via the software and network system. The Big data is an endless resource for experiences on analyzing, and identifying or predicting business trends at high levels of accuracy. The digital learning resources in form of combination of virtual space and real space are extremely diverse, for instances, the library space is no longer a specific place but can be exploited everywhere with a single action. The curriculum is more diverse, more specific and more responsive to better meet learners' needs.

Besides the advantages of the IR 4.0, many issues are arising in education and also duties that universities should deal with.

Firstly, the foundation of the IR 4.0 is the connection between the real world and the virtual one through some digital and networking software, so information technology knowledge and skills place an important role for suppliers and consumers. In the coming period, the duties of universities are to train experts in information technology, and actively equip their graduates with digital knowledge and related skills so as to meet the social needs in the IR 4.0.

Secondly, employment and unemployment are popular phenomena of the IR 4.0; and especially, at an early stage, the labor force may not be able to adapt to the new industrial conditions and the dramatic shift of economic fields. In fact, there have been changes in the labor markets, and robots have begun to do simple jobs instead of human. Robots with their infinite learning resources can perform well in teaching some subjects such as geography, history, etc. and can completely replace the current teaching staff. Some employees in legal, accounting and tax consultancy can be completely replaced by smart robots. Therefore, challenges for universities are their training orientations to meet requirements of the IR 4.0 and their retraining to adapt new industries.

Thirdly, the current curricula have not been flexible, and their contents are not suitable for the demands and trends of the labor market in the IR 4.0. The education and training is one of the nine areas under changes, and the education system is strongly and completely impacted. The list of training programs and curricula have to be adjusted and updated because the borders among fields are very light. The universities need to conduct their training in two directions: on the one hand, they should meet the social orientation; and on the other hand, they should supply labor forces to meet the requirements of the labor market. However, the greater pressure is put on the universities when their curricula have to both fulfill the professionalism in particular fields and the interdisciplinarity (i.e. information technology, digital, networking, and academic knowledge) and special skills such

Features	By 1980 Education 1.0	1980 Education 2.0	1990 Education 3.0	2000 Education 4.0
Purposes	Education	Employment	Knowledge generation	Creation and value generation
Training program	Single-disciplinary	inter-disciplinary	multi-disciplinary	trans-disciplinary
Technology	Paper + Pen	PC and laptop	Internet + mobile device	Internet to connect all
Digital education	Digital refugee	Digital immigrant	Digital native	Digital citizen
Teaching	One-way	Two-way	Multi-way	Everywhere
Quality insurance	Academic quality	Teaching quality	Quality assurance as required	Quality assurance as regulated
Campus	Offline model	Offline and online combined model	Network, system	Ecology
Output	Skilled laborer	Intellectual laborer	Co-generator of knowledge	Creator and startup

as competences of systemic thinking, analysis, and linking of the real and virtual world, creativity, group work, inter-disciplinary collaboration, etc. In the context of rapidly changing knowledge of technology, equipping learners with skills of self-learning and lifelong learning is more important than providing just the academic knowledge. Thus, the IR 4.0 has put a lot of pressure on the universities from their developing curricula, updating the training contents and training skills for learners to meet the industrial requirements.

Finally, another issue for higher education institutions is their organization of curricula. The IR 4.0 requires changing the training methods and techniques to adapt the strong application of information technology, digital technology, and networking. Forms of online training, virtual training, simulation, and digital lecture, etc. will become a training trend in future. This puts great pressure on the training institutions' preparation of teaching resources, especially teachers and learning space.

Education 4.0

Education 4.0 comes into life to meet the needs of the industry labor market 4.0. Education is spread every corner where people, things and machines are connected to create personal learning. The characteristics of education systems can be sketched in the table above.

Therefore, training institutions need to push up their education activities to adapt to the IR 4.0.

Identification of training fields for future: The IR 4.0 has strongly taken place with clear trends in the reconstruction of industries . The trend of industrial changes has been discussed and clarified on the industrial world forums and the results of researches on the IR 4.0 and the actual deployment of the industry programs in the leading countries such as German, America, and Japan, etc. The universities need to identify key training disciplines and training fields of future so as to meet the requirements of the era and prepare forces to meet the industrial requirements. Specific fields for target training should include information technology, networking management, data mining, security, materials, biomedical, and robotics, etc.

Curriculum design: Education institutions should design more flexible programs with more updated knowledge development of skills appropriate to the IR 4.0 as well as development of critical and interdisciplinary thinking. In addition, the bachelor programs should not only provide professional knowledge but also

knowledge of society, information technology, and network management, etc. to enable learners to quickly adapt to technology changes, and effectively work in environments with high connections among various fields, and between the virtual and the real worlds. The skills important to human resources in the technology-interactive environment should be included in the program learning outcome: teamwork, creative skills, critical thinking, logical thinking, making decision skills in uncertain conditions, etc.; and especially, learners should be provided with methods and perception of lifelong learning.

Designing short-term training courses or supplementing knowledge programs for different learners from enterprises is essential in the IR 4.0 context. Society strongly demands enhancement of knowledge when the industrial reconstruction and technology change happen. The IR 4.0 will open a huge training and education market for education service companies, especially universities with training strengths. However, the universities need to be more friendly and socially engaged with the labor market to develop effective programs and at the same time, they do not lose their own scholarly nature and their broader educational duties.

Organization and innovation in education methods: Forms of organization and teaching methods at universities should be changed to adapt to the requirements in the IR 4.0 context. Cheaper technology is a good condition for universities to invest in facilities, tools, and modern teaching aids. Besides direct instruction for learners, the universities need to use other methods such as training online, designing the virtual environment for learners and trainers to interact and communicate with each other, providing practice in labs or virtual simulation rooms. They should use computer systems and big data in designing and organizing programs for different types of learners in the most effective ways. The online learning system has now become more and more popular, and the individual data is collected via online systems. With the accumulation of large amounts of individual data (i.e. their learning duration, method, training process, interaction level, and learning outcomes, ...), the Machine Learning algorithms will offer the best educational method for each learner to optimize their personal approach to learning that even the best teachers can not provide them. Therefore, the universities should speed up the use of this form of training and learning.

Preparation of teaching resources: Training to meet the requirements of the IR 4.0 demand the teaching staff with high qualifications of professionalism, information technology, and network system, etc. Then, the preparation of human resources is an important task for the universities to do thoroughly. Their teaching staff should update professional knowledge, and technological knowledge, etc., by regularly attending training courses, seminars, and conferences. In addition, the universities should expand their conversation and cooperation with enterprises in activities of research, training and consultancy; this helps their teaching staff have the opportunity to access practical production and business conditions as well as capture market changes to make adjustments in their teaching.

IV. Adaptive training of VNU-HCM in the IR 4.0

IV.1 Policy

- The existed programs are reviewed, adjusted, and updated; new programs are renovated or designed to meet the labor market's demands; programs related to the STEM field, particularly the information technology are given priority to develop.

- Legal bases are constructed for class models such as non-student classrooms, and MOOC online teaching system.

- Sabbatical activities are formalized for the teaching staff to narrow the gap between the academic theory and the industrial practice.

IV.2 Training program

- The philosophy of liberal education is publicized in order to create adaption to the rapid change of the manufacturing industry as well as high job opportunities for learners.

- The programs are tailored to the quality and abilities of the learners.

- New training programs are placed more

emphasis to adapt to the social needs, especially the "hybrid" ones with the combination of exploiting the utility or knowledge of information technology.

- The levels of knowledge, skills, and attitudes in information technology and English are improved in a reasonable route.

- Especially, English courses are not only organized in the classroom or on the Internet but also in the "English speaking environment" via creating space of learning English with extra activities using English all the time like Cafe talks, picnics, art contests, skill contests, and networking forums, etc.

- There is positive and active connection and accompany with enterprises in training activities so as to obtain their quick feedback. They are organizations under direct and strong influence from the IR 4.0.

- The regulations on the participation levels for enterprises in teaching activities are set up.

IV.3 Teaching and learning method

- Learning activities are designed in line with learners' needs; Learning is performed anytime and anywhere.

- Learning is performed via practical experiences and applying the project-based learning methods; practical issues are addressed through student-centered collaboration and group work. Knowledge and skills are effectively transferred for students to understand concepts more thoroughly and feel their programs interesting and meaningful.

- The utilities of the Internet for training activities are increasingly exploited such as live streaming on YouTube and Facebook.

- Knowledge and skills of information technology are equipped to the teaching staff for their training activities.

- Consideration is taken into promoting and training the educational coaching tend for the teaching staff.

IV. 4 Service Infrastructure

- E-learning tools which have been well implemented at VNU-HCM are developed dramatically.

- Consideration is taken into constructing the training system in the MOOC for learner's lifelong learning.

- There are pilots on the model of constructing online laboratories and workshops.

- New systems to support online interactive classes are constructed and developed.

V. Conclusion

Based on the technological achievements of the revolution 3.0 as well as the rapid development of information technology, digital and networking, the industrial revolution 4.0 has established and developed strongly, opened a new era for the human progress. The industrial revolution 4.0 has completely changed the previous concepts and thinking, and opened new manufacturing methods to improve the global economy effectively. It has given not only opportunities for development but also in challenges for us to make changes to meet social requirements. Some recommendations for university are: 1) There should be clear orientations and identification of training majors to fulfill the current and future needs; 2) Curricula should be changed to meet the requirements in human resources in the IR 4.0, including the contents and updated knowledge to fulfill the requirements of career change; 3) Training methods should be changed to meet the training and learner needs; information technology, digital technology, networking and big data should be effectively applied to teaching such as online training, virtual simulation, and virtual labs, etc.; 4) Human resources should be prepared for training activities to meet the demands in the IR 4.0.

ORIENTATION FOR THE ACTION PLAN 2018

The year 2018 is the third year to continue the route of VNU-HCM'S strategic plan the major mission is "Developing the system and improving the VNU-HCM systemic model based on the university autonomy associated with accountability and corresponding responsibility". This year is one for promoting science and technology - one of the six strategic breakthroughs and also the time for VNU-HCM to evaluate its half way of executing the Strategic Plan of the period 2016-2020 and the vision 2030.

Continuing the activities carried out in 2017 and the previous years and based on the analysis of the reality of deployment, VNU-HCM developed the action plan in 2018 with the theme: "Science and technology to enhance the integration", including the following key missions:

1. Creation of scientific and technological products with great significance and influence, high application for the society: Transforming the long-term investment mechanism is done for research groups to produce high-value scientific products. Research for the development of underlying programs approved by the Prime Minister is conducted; the pilot project of the Excellent Center is effectively implemented. Many foreign experts come to work for VNU-HCM; many articles with high IF indexes are published. Science and technology enterprises are established; Cooperations with locals are signed, especially in the issues of the 7 breakthrough programs of Ho Chi Minh City. A number of inter-disciplinary projects are implemented to create products for society; and scientific research is integrated with training.

2. Development of scientific and technological resources through the mobilization of non-budgetary support sources and funding sources for research equipment and facilities in the laboratories.

3. Reformation of the operation mechanism in the member universities: the University of Information Technology, University of Economics and Law, the International University, and the University of Technology.

4. Improvement of the education quality by attracting and selecting good candidates, building and developing advanced training programs, speeding up the quality assurance and assessment in line with international standards.

5. Construction of the appropriate financial mechanism to motivate the development and enhancement the effective management of financial resources, promote the use and exploitation of facilities, deploy the PPP projects to diverse the fund for basic construction.

6. Establishment of a green urban area with a modern management system for a smart, secure, sustainable university urban in close connection with the locals.

7. Activeness in the regional and international integration: the university-enterprise cooperation projects are implemented to promote the training and scientific research effectively to meet the social needs.

In the new context of the region and the world, the foundation of values and general orientations in 2018 will facilitate the member universities and affiliated organizations to promote their strengths, which is the base for the construction and deployment of the action plan in the year.

THE FINANCE 2016

In 2016, VNU-HCM implemented the first project in the period 2016-2020. VNU-HCM identified the action theme "Training programs – being modern, interdisciplinary and integrated", and the key orientations for the development and deployment of the action plans of the member universities were the following:

1. Developing and promoting the programs that are advanced and systematic with integrated knowledge, skills and attitudes to provide high-quality human resources for society, rain excellent individuals and define VNU-HCM's dignity.

2. Promoting the interdisciplinarity of VNU-HCM training programs based on the frames of learning outcomes, competences, general background knowledge, and other programs like double-degree ones.

3. Increasing the quality assessment and assurance in line with the regional and international standards to ensuring the training quality; joining the assessment and assurance of training institutions.

4. Promoting scientific research and technology transfer, closely linking scientific research with training, developing research-oriented postgraduate programs for the appropriate majors, faculties, universities in VNU-HCM.

5. Promoting the key roles of VNU-HCM in training, research, and community service; contributing to the socio-economic development of the nation in general, and that of Ho Chi Minh City, Bind Duong and other provinces cooperating with VNU-HCM such as Lam Dong, Quang Ngai, and Dak Nong, etc.

6. Developing divisions to support the construction of training programs, refreshing and improving the teaching staff's competences so as to effectively deploy the programs, fulfill the learning outcomes.

7. Ensuring the financial resources in education, diversifying the incomes from socialized activities and services, etc. and using the financial resources effectively at the same time.

The ASEAN Community was officially established on November 22nd, 2015. In 2016, it entered the year 2016 in a new position and gave numerous opportunities to promote further regional development, and take advantage of a stable economic community embedded in a common identity, and ready for cooperation with the others. Vietnam's education system was then under strong competition with the other countries in the region and this required greater social responsibilities for its training products, its competitiveness and education quality. Facing with that trend, VNU-HCM increasingly improved its training quality, confirmed its role and position in the national education reform, and accelerated the implementation of the objectives, missions, and solutions set up in the Resolution No. 29-NQ/ TW dated 04/11/2013 by Section XI of the 8th Central Committee Conference on fundamental and comprehensive renovations of education and training to fulfill the requirements of the industrialization and modernization in the socialism-oriented and internationally integrated market economy.

VNU-HCM's financial activities were affected by the recovery of the world economy slower than forecasted. The national economy faced with many difficulties and challenges so its incomes slightly rose in comparison with those in the previous years in spite of the efforts to search for and develop financial resources to ensure the fulfillment of the strategic goals as planned.

After the Governmental Resolution No. 01 / NQ-CP, dated 07/01/2016 on the major missions and solutions to directly implement the socio-economic development and estimate the budget in 2016, and the Directive No. 22 / CT-TTg , dated 03/6/2016 on enhancing the management to implement the budget in 2016 by the Prime Minister, and the Official Letter No. 2304 / BTC-QLCS dated 19/02/2016 on

buying property in the budget in 2016 by the Ministry of Finance, VNU-HCM issued the Official Letter No. 300 / DHQG-KHTC, dated March 1st, 2016 to instruct the member universities and affiliated organizations to execute the Governmental Resolution No. 01 / NQ-CP.

The total regular revenue of VNU-HCM increased from 6% to 16% per year in the period 2014-2016. In 2015, it rose much more than in 2014 and 2016. In 2016, the revenue of the whole VNU-HCM system was VND 1,613.9 billion, increasing 6% compared to that in 2015, but not as much as the revenue of 2015 compared with that of 2014, i.e. an increase by 16%. It was because in 2015, the governmental budget for the project "Strengthening the equipment for training in VNU-HCM's member universities and affiliated organizations" counted VND 93.3 billion. VNU-HCM's main revenue came from tuitions, accounting from 52% to 57% of the revenue sources, and from the governmental budget, accounting for 29% to 34%. The proportion of the governmental budget is declining annually. And the final revenue source was financial aids and donations, accounted for about 12% to 15%. VNU-HCM had great efforts to find other financial sources from individuals and organizations through the VNU-HCM Development Fund.

The total regular expenses of VNU-HCM in 2016 were VND 1.547,7 billion. It was less than the total revenues because some items collected from donations, and others ...and were not spent in the year; and the unaccounted fund for the science and technology project "Designing and manufacturing circuits, card readers, RFID readers and constructing the application system" of the Integrated Circuit Design Research & Education Center wasn't paid was in the progress of implementation.. In the structure of the expenditures of the member universities and affiliated organizations, the funding for human resources was VND 508.3 billion, increasing 2% compared with that of 2015 and accounting for 33% of the total expenditure. The funding for professional activities and scientific research was VND 613.7 billion, accounting for 40%. In addition, VNU-HCM spent VND 139.3 billion, accounting for 9% of the total expenditure, to upgrade and repair the facilities and equipment for laboratories. The funding for other activities was VND 226.7 billion, accounting for 15% of the total expenditure, increasing 16% compared to that of 2015 and higher than the previous years. It was due to the fact that the member universities and affiliated organizations handled the differences in their revenues and expenditures through reserve funds like the income stabilization fund, career development fund, welfare fund and reward fund. All the funds were VND 190 billion. The expenditure students' tuition exemption and discount from the governmental budget in 2016 was 8.6 billion, which was implemented in accordance with the Decree No. 74/2013/ ND-CP, dated 15/7/2013 by the Government. In addition, VNU-HCM spent a considerable budget for scholarships to talented and excellent students to encourage them. It was 59.7 billion, accounting for 4% of the total expenditure, and the budget to support the minor-ethnic students' tuition was VND 311 million in accordance with the Decision No. 66 / QD-TTg, dated 11/11/2013 by the Prime Minister.

The balanced at the end of 2016 transferred to 2017 was VND 66.2 billion. It was a difference in the revenues and expenses that was transferred to to the year 2017. The most money in the balanced budget came from the fund for the state-level research project of the Integrated Circuit Design Research & Education Center, which was in the final stages of implementation and unapproved yet. Then the payment was not accounted. Besides, some other funds came form the financing aids of foreign projects and they were not actually spent in the year.

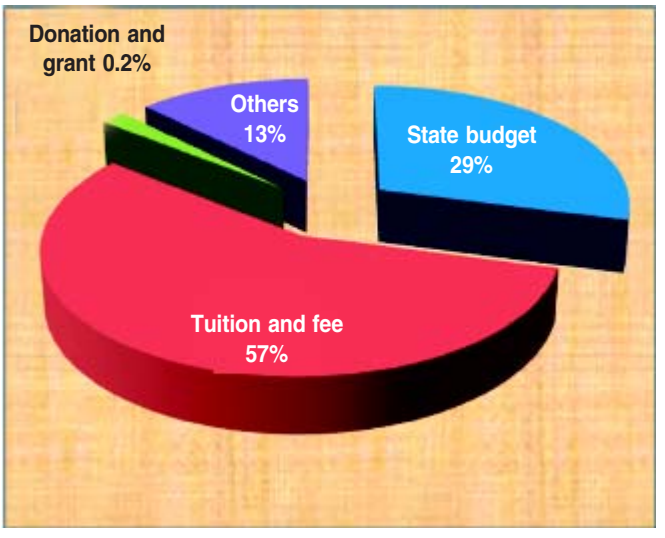
FINANCE IN 2016

PART I: EDUCATION & TRAINING AND SCIENTIFIC RESEARCH (REGULAR FUNDING)

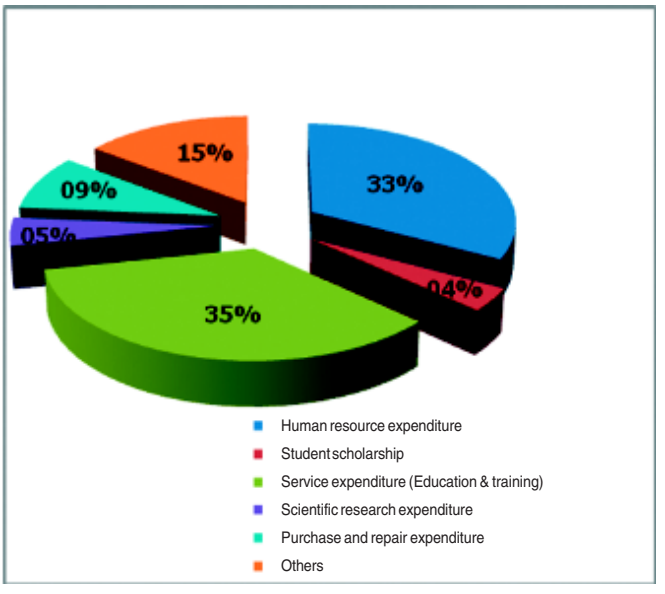
Calculation unit: VND

	2016
Total income	1.613.900.497.853
State budget	469.311.788.640
Tuition and fee	912.264.888.342
Donation and grant	29.604.946.123
Others	202.718.874.748
Total expenditure	**1.547.716.172.595**
Human resource expenditure (staff)[1]	508.325.360.598
Student scholarship	59.732.347.171
Service expenditure (Education & training)	542.749.244.445
Scientific research expenditure	70.955.117.396
Purchase and repair expenditure	139.261.471.072
Others [2]	226.692.631.913
Balance of funds transferred to the following year	66.184.325.258

Income distribution mechanism



Expense allocation mechanism



1. Human resource expenditure includes expenditure for increased income.
2. Other expenditures include: setting up funds in line with the Government's regulations, support expenses for major holidays, expenses for property insurance, allowances for tuition exemption and reduction based on Decision No. 74/2013/NĐ-CP

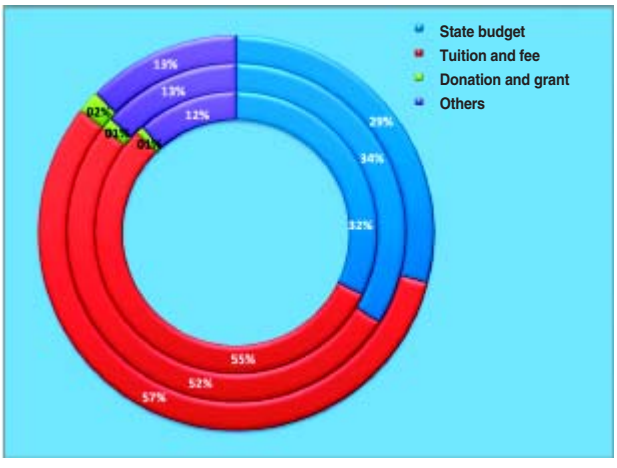
FINANCE IN THE PERIOD 2014-2016

Calculation unit: VND

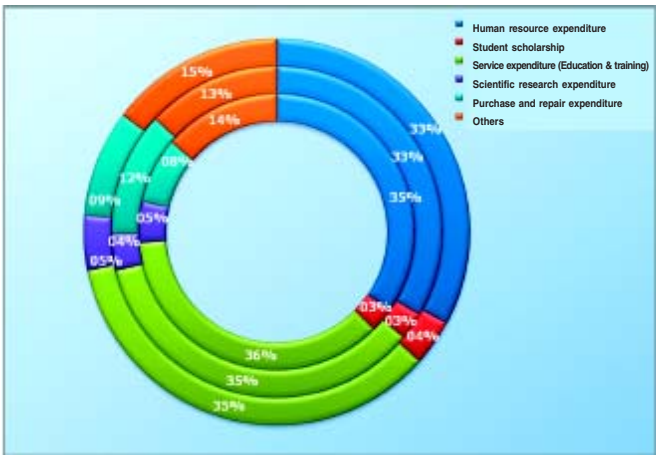
	2014	2015	2016
Total income	**1.310.345.119.510**	**1.525.642.178.510**	**1.613.900.497.853**
State budget	423.308.104.942	517.263.475.592	469.311.788.640
Tuition and fee	723.800.663.150	788.096.624.038	912.264.888.342
Donation and grant	11.319.189.961	17.678.144.830	29.604.946.123
Others	151.917.161.457	202.603.934.050	202.718.874.748
Total expenditure	**1.300.524.353.666**	**1.497.611.846.361**	**1.547.716.172.595**
Human resource expenditure (staff)[3]	450.376.754.063	499.133.096.917	508.325.360.598
Student scholarship	37.619.538.640	40.396.241.996	59.732.347.171
Service expenditure (GD-ĐT)	470.835.320.601	526.751.440.159	542.749.244.445
Scientific research expenditure[4]	63.534.335.279	54.501.979.945	70.955.117.396
Purchase and repair expenditure	99.406.175.067	181.018.314.569	139.261.471.072
Others	178.752.230.016	195.810.772.775	226.692.631.913
Balance of funds transferred to the following year	**9.820.765.844**	**28.030.332.149**	**66.184.325.258**
% in the income source	0,7%	1,8%	4,1%

3. Human resource expenditure includes expenditure for increased income
4. Scientific research expenditure does not include equipment purchase and human resource expenditure for science and technology activities.

INCOME DISTRIBUTION MECHANISM IN THE PERIOD 2014 - 2016



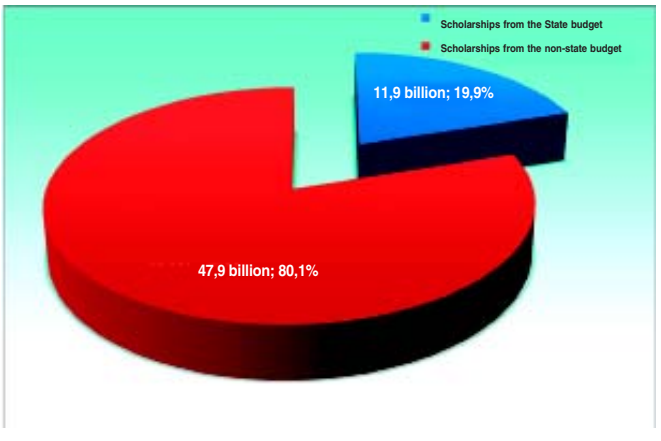
EXPENSE ALLOCATION MECHANISM IN THE PERIOD 2014 - 2016



REVENUE OF SCIENCE AND TECHNOLOGY TRANSFER IN THE PERIOD 2014 - 2016

Calculation unit: VND billion

STUDENT FINANCIAL SUPPORT IN 2016



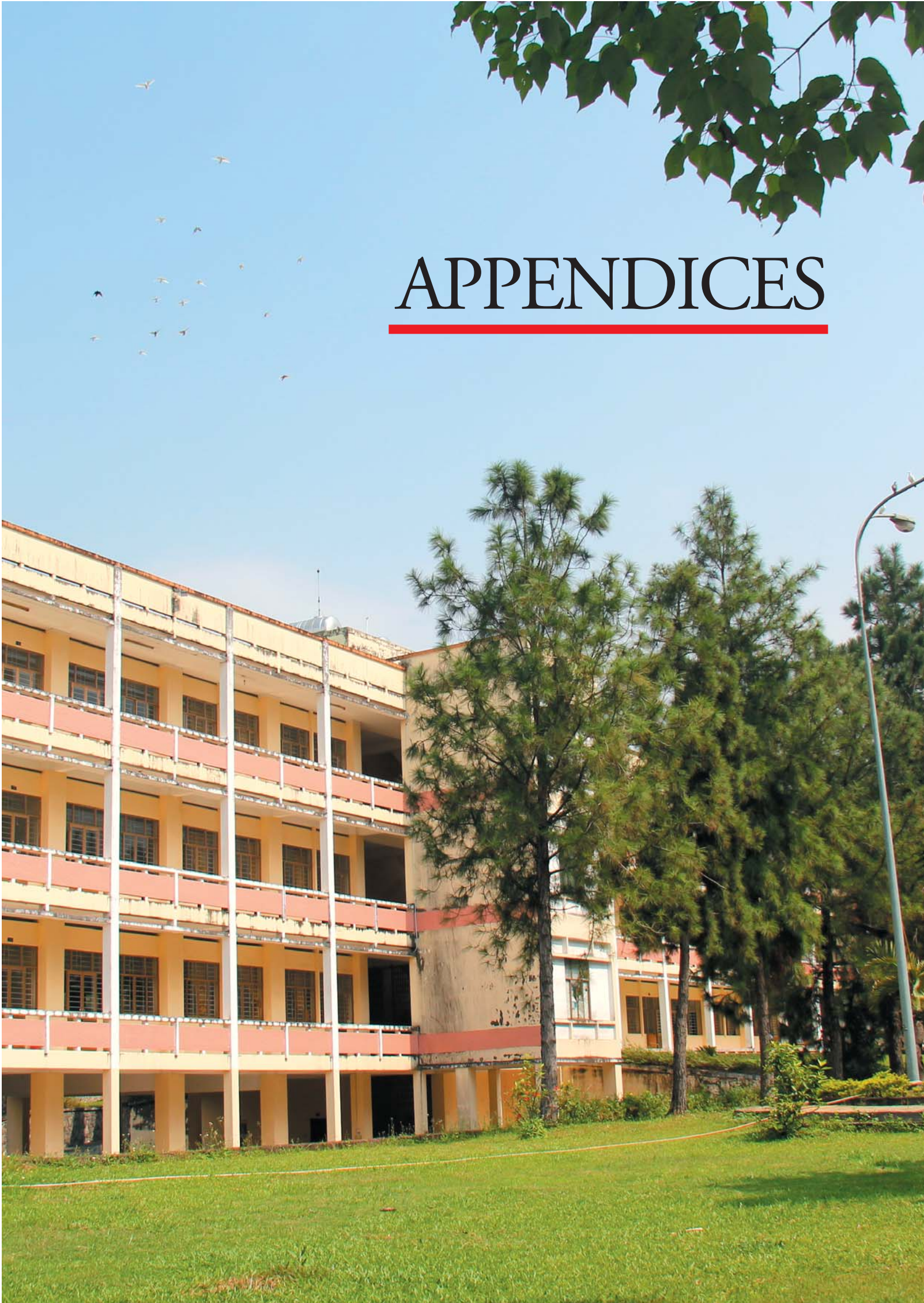
THE DEPLOYMENT OF INVESTMENT IN BASIC CONSTRUCTION IN 2016

Calculation unit: VND million

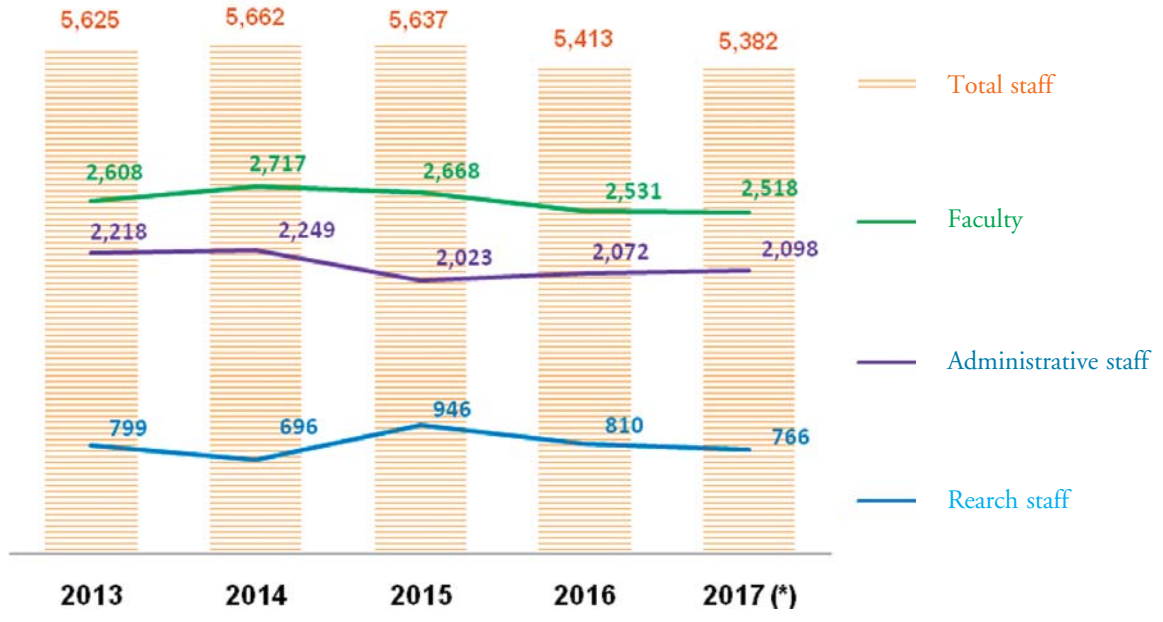
Ord.	PROJECT ITEMS	Construction place	Account-opening places	Start time and finish time	Total approved investments	Total estimated cost Investment	Investment capital plan 2016		Balance	Percentage
							Allocated investment plans	Payment due on 01/ 31/2016		
I	**PREPARED INVESTMENTS**				**2.584**	**2.584**		**100**		
01	Prepared investment in Project QG-HCM-04	TD.Dist	HCMC		984	984	584	584		100
02	Prepared investment in Project of the School of Medicine - Phase 1	DA.Dist	HCMC		4.500	4.500	2.000	2.000		100
II	**INVESTMENTS IN EDUCATION & TRAINING PROJEC T IMPLEMENTATION**				**596.416**	**488.038**	**108.378**	**81,8**		
01	Project QG-HCM-01: Compensation for clearance, resettlement and common infrastructure construction	TD-DA	HCMC	2002-2018	1.552.197	1.552.197	114.389	103.104	11.285	90,1
02	Project QG-HCM-01A HCMC: Compensation for clearance, resettlement in Linh Xuan Ward, Thu Duc District	TD.Dist	HCMC	2009-2020	1.759.384	1.759.384	151.700	100.000	51.700	65,9
03	Project QG-HCM-01A Binh Compensation for clearance, resettlement and VNU-HCM construction in the area of Binh Duong province	DA.Dist	HCMC	2009-2018	787.669	787.669	234.256	189.239	45.017	80,8
04	Project QG-HCM-02: Investment in construction of the Center area	TD-DA	HCMC	2002-2020	486.857	486.857	46	46		100
05	Project QG-HCM-03: Sub-project Investment in construction of the Institute for Environment and Resources	DA.Dist	HCMC	2009-2016	144.120	144.120	3.770	3.770		100
06	Project QG-HCM-04: Sub-project Investment in construction the University of Information Technology	TD.Dist	HCMC	2009-2018	381.852	381.852	25.000	25.000		100
07	Project QG-HCM-06B: Investment in construction the Public Service Building	DA.Dist	HCMC	2006-2016	157.912	157.912	581	205	376	35,3
08	Project QG-HCM-07: Construction of the University of Science and High School for the Gifted	DA.Dist	HCMC	2005-2018	489.607	489.607	30.000	30.000		100
09	Project QG-HCM-08: Construction of the University of Social Sciences & Humanities	TD.Dist	HCMC	2005-2020	384.090	384.090	6.674	6.674		100

Ord.	PROJECT ITEMS	Construction place	Account-opening places	Start time and finish time	Total approved investments	Total estimated cost Investment	Investment capital plan 2016		Balance	Percentage
							Allocated investment plans	Payment due on 01/31/2016		
10	Project QG-HCM-09: Construction of the University of Technology	DA.Dist	HCMC	2005-2018	557.539	557.539	30.000	30.000		100
III	**INVESTMENTS IN SCIENCE & TECHNOLOGY PROJECT IMPLEMENTATION**				**113.000**	**110.206**	**2.794**	**97,5**		
01	PTN Advanced design and machining technology – UT	Dist.10	HCMC	2013-2017	51.999	51.999	10.400	10.400		100
02	PTN Biofuels and Biomass – UT	Dist.10	HCMC	2014-2017	29.849	29.849	9.849	9.849		100
03	PTN Research on cancer for research and development of technology products – US	DA.Dist	HCMC	2015-2018	65.000	65.000	29.151	29.151		100
04	PTN Development of the inkjet technology application to produce micro Nano components – Institute for Nano Technology	TD.Dist	HCMC	2015-2018	40.000	40.000	10.000	10.000		100
05	PTN High performance computing – UT	Dist.10	HCMC	2015-2017	39.000	39.000	10.000	10.000		100
06	PTN Enhancement of in-depth research capacity in biomedical engineering – IU	DA.Dist	HCMC	2015-2017	30.000	30.000	10.000	10.000		100
07	In-depth investment in environmental toxicology laboratory – the Institute for Environment and Resources	DA.Dist	HCMC	2016-2018	50.000	50.000	26.600	26.555	45	99,8
08	In-depth investment in tissue engineering lab - US	DA.Dist	HCMC	2016-2018	20.000	20.000	7.000	4.252		60,7
IV	**INVESTMENT IN SPORTS PROJECT IMPLEMENTATION**				**10.000**	**5.566**	**4.434**	**55,7**		
01	Project Investment in building the physical training and sport center	DA.Dist	HCMC	2016-2018	40.000	40.000	10.000	5.566	4.434	55,7
V	**INVESTMENT IN INFORMATION TECHNOLOGY PROJECT IMPLEMENTATION**				**10.000**	**9.995**	**5**	**99,9**		
01	Project Investment in improving the capacity, quality of training and research on information security of the University of Information Technology	TD.Dist	HCMC	2016-2017	20.000	20.000	10.000	9.995	5	99,9
	TOTAL						**485.200**	**474.594**	**10.606**	**97,8**

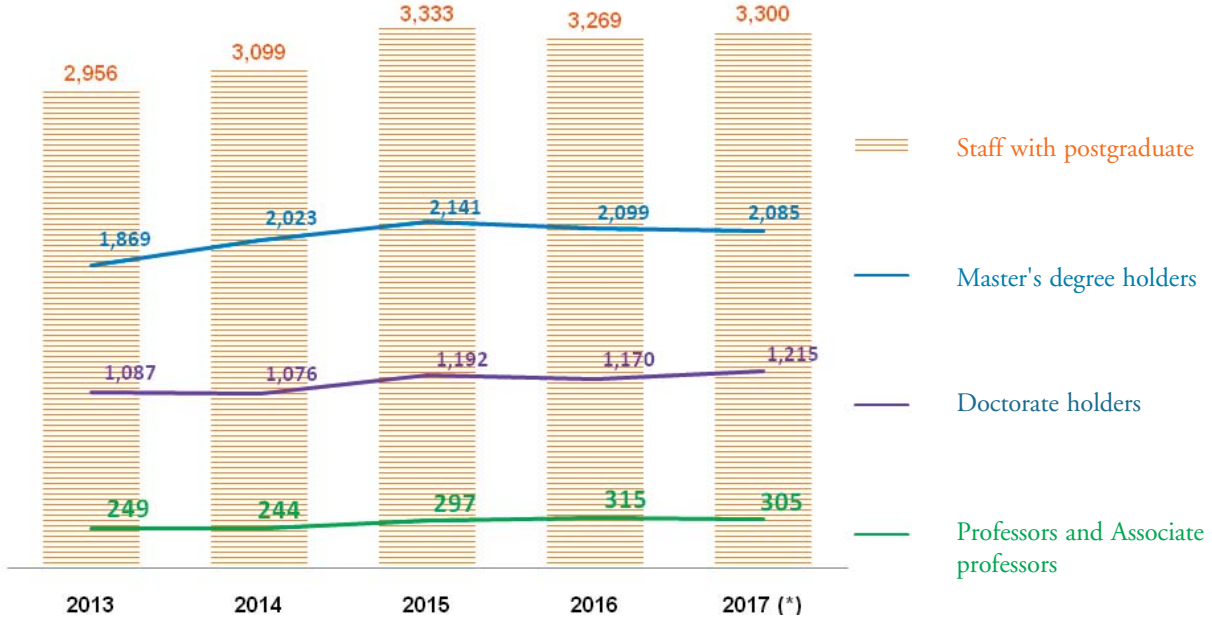
APPENDICES



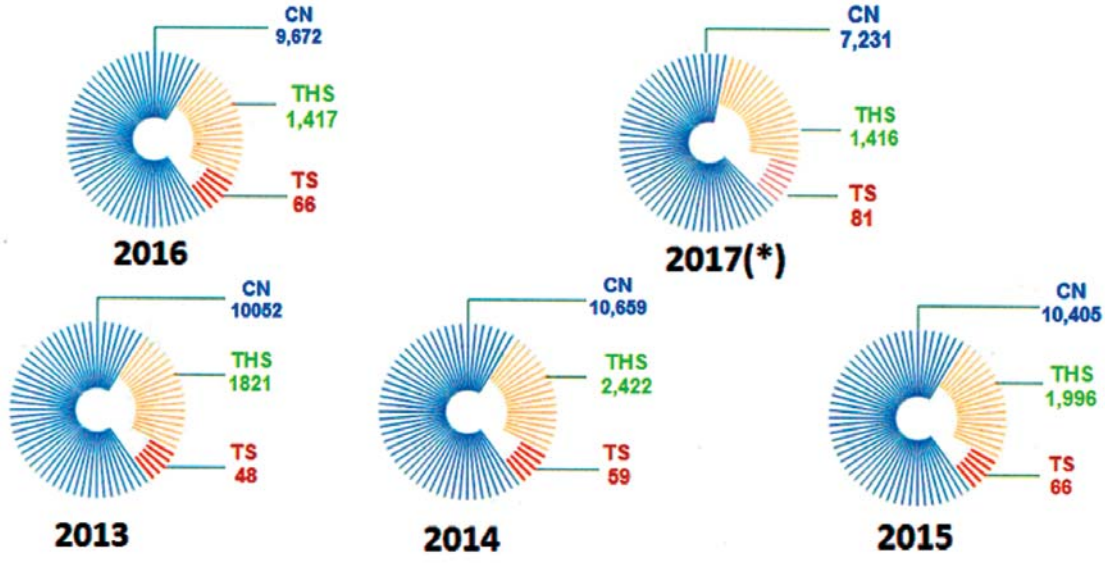
STATISTICS OF THE STAFF IN THE PERIOD 2013-2017



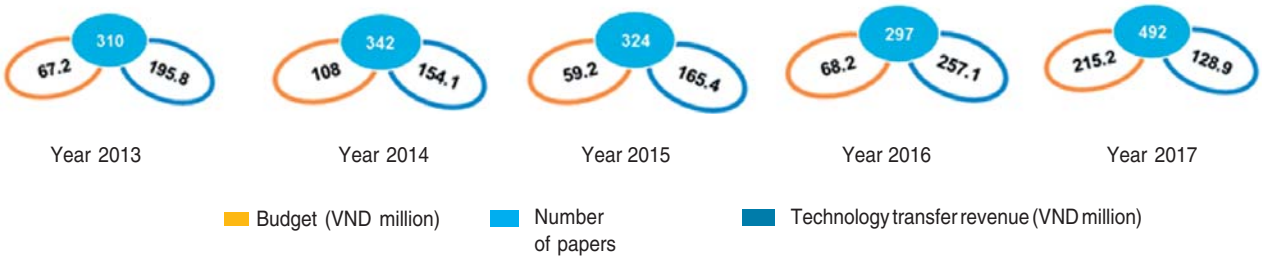
STATISTICS OF THE STAFF IN THE PERIOD 2013-2017



STATISTICS OF THE TRAINING SCALES



STATISTICS OF SCIENCE & TECHNOLOGY



STATISTICS OF GRADUATES FROM THE HONOR ENGINEERING AND BACHELOR PROGRAMS

University	2013	2014	2015	2016	2017(*)	Total
University of Technology	204	227	235	232	26	924
University of Science	134	154	111	47	3	449
University of Social Science & Humanities	59	56	46	9	17	187
University of Economics and Law	63	72	66	43	44	288
University of Information Technology	25	3	14	9	58	109
Total	**485**	**512**	**472**	**340**	**148**	**1.957**

(*) The statistics as at October 2017

STATISTICSOF GRADUATES FROM THE SPECIAL PROGRAMS (HIGH QUALITY PROGRAM, PFIEV PROGRAM, ADVANCED PROGRAM)

Order		University	Proportion of graduate/ regular graduate
1	University of Technology	48	2%
2	University of Science	33	14%
3	University of Social Science & Humanities	58	3%
4	University of Information Technology	9	2%
	VNU-HCM	**148**	**2%**

LIST OF ACCREDITED UNIVERSITIES AND TRAINING PROGRAMS

Order	Member university	Assessment time	Assessment standards
I. List of VNU-HCM member universities achieving institutional-level accreditation certifications			
1.	International University	12/2015	Ministry of Education and Training
2.	University of Social Sciences and Humanities	9/2016	Ministry of Education and Training
3.	University of Information Technology	10/2016	Ministry of Education and Training
4.	University of Economics and Law	10/2016	Ministry of Education and Training
5.	University of Science	11/2016	Ministry of Education and Training
6.	University of Technology	3/2017 9/2017	HCÉRES (Europe) AUN-QA
II. List of training programs achieving accreditation certifications			
University of Technology			
1.	Electronics - Telecommunications (Faculty of Electronics)	12/2009	AUN
2.	Manufacturing Engineering (Faculty of Mechanics)	12/2011	AUN

3.	Chemical Engineering 9/2013	AUN	
4.	Construction Engineering	9/2013	AUN
5.	Automation & Control Engineering	10/2014	AUN
6.	Industrial Management	10/2014	AUN
7.	Mechanical Engineering (Faculty of Applied Sciences)	9/2015	AUN
8.	Industrial Systems Engineering (Faculty of Mechanics)	9/2015	AUN
9.	Electrics - Electronics (Advanced program), Faculty of Electrics - Electronics	9/2015	AUN
10.	Electrics - Electronics	9/2016	AUN
11.	Environmental Engineering, Faculty of Environment and Resources	9/2016	AUN
12.	Computer Science	11/2013	ABET
13.	Computer Engineering	11/2013	ABET
14.	Mechatronics	2016	CTI
15.	Aeronautical Engineering	2016	CTI
16.	Advanced Materials	2016	CTI
17.	Polymers and Composites	2016	CTI
18.	Telecommunications	2016	CTI
19.	Energy Systems	2016	CTI
20.	Civil Construction and Energy	2016	CTI
21.	Industrial Management, specialization of EMBA-MCI	2015	FIBAA
22.	Industrial Management, MSM program	2016	ACBSP AMBA/IACBE
University of Science			
1.	Information technology	12/2009	AUN
2.	Chemistry	9/2016	AUN
University of Social Sciences and Humanities			
1.	Vietnamese Studies	12/2011	AUN
2.	English Literature & Linguistics	9/2013	AUN
3.	International Relations	12/2014	AUN
4.	Journalism	01/2016	AUN
5.	Literature	11/2016	AUN
6.	Social Work	10/2017	AUN
International University			
1.	Computer Science	12/2009	AUN
2.	Biotechnology	12/2011	AUN
3.	Business Administration	12/2012	AUN
4.	Electronics and Telecommunication (AUN-DAAD)	4/2013	AUN
5.	Industrial Systems Engineering	10/2015	AUN
6.	Biomedical engineering	10/2015	AUN

7.	Master of Biotechnology		11/2016 AUN
8.	Information technology	10/2017	AUN
9.	Biotechnology	10/2017	AUN
10.	Business Administration	10/2017	AUN
University of Economics and Law			
1.	Foreign economic Relations	12/2014	AUN
2.	Finance and Banking	12/2014	AUN
3.	Economics	01/2016	AUN
4.	Accounting	11/2016	AUN
University of Information Technology			
1.	Information System	11/2016	AUN

FOREIGN RELATIONS

OUTPUTS

Order	Contents	2013	2014	2015	2016	2017	Total
1.	Teaching	1	2	12	16	3	34
2.	Master training	1	2	66	33	16	118
3.	Doctorate and Postgraduate training	6	7	190	159	38	**400**
4.	Fostering courses	4	21	24	5	143	197
5.	Conferences, seminars	83	41	167	145	193	629
6.	Surveys, tasks	121	41	89	99	32	382
	Tổng	**216**	**114**	**548**	**457**	**425**	**1.760**

Summary figures of the numbers of staff and students in the whole VNU-HCM system

OUTBOUND DELEGATIONS IN 2017

Task contents	Number of people	Percentage
Conferences/ seminars attendance	139	49%
Learning, research	65	23%
Project/program implementation	11	4%
Search for cooperation opportunity	32	11%
Teaching	3	1%
Others	33	12%
Total	**283**	

Order	Team names	Contact Information
Social sciences and humanities, economics, law, management		
1	Research team in Philosophy	University of Social Sciences & Humanities
2	Research team in Religion	University of Social Sciences & Humanities
3	Research team in Culturology	University of Social Sciences & Humanities
4	Research team in Economics - Value Chain	University of Technology
5	Research team in Economics and Finance	Research Center for Economics and Finance, University of Economics & Law
Natural Sciences		
Mathematics		
6	Research team in Mathematical Optimization	International University
7	Research team in Differential Equations	International University
8	Research team in Mathematical Analysis	University of Science, International University
Physics		
9	Research team in Nuclear physics	University of Science
10	Research team in Applied Physics	University of Science
11	Research team in Computational Physics	University of Technology, University of Science
12	Research team in Astrophysics	International University
Chemistry & Chemical Technology		
13	Research team in chemistry of natural compounds	University of Science, University of Technology
14	Research team in development of new products in the food industry and ferment industry	University of Technology, International University
15	Research team in chemical synthesis	University of Technology
16	Research team in Applied Chemistry	International University
Biology, Biotechnology & Health		
17	Research team in Research and application of stem cells	University of Science
18	Research team in tissue engineering	University of Science
19	Research team in bio-simulation and computer-aided design	International University
20	Research team in Reproductive Health	School of Medicine, VNU-HCM
21	Research team in Biomedical engineering	International University
Earth and Environmental Science		
22	Research team in Climate Change	Center for Water and Climate Change Management, University of Technology, University of Science, University of Social Sciences &Humanities, Institute for Environment and Resources

23	Research team in Environmental Management & Technology	University of Technology, University of Science, Center for Water and Climate Change Management, Institute for Environment and Resources
24	Research team in Environmental Ecology	University of Science
25	Research team in Environmental toxicology	University of Technology, University of Science, Institute for Environment and Resources
26	Research team in Environmental geology	University of Technology, University of Science
Technology		
Information and communications technology		
27	Research team in Information Security	Software Technology Park, University of Science, University of Technology, University of Information Technology
28	Research team in Grid & High Performance Computing	University of Technology
29	Research team in Artificial intelligence	University of Science, University of Information Technology
Mechanics - Automation		
30	Research team in Civil & industrial robot system	University of Technology, University of Science, National-Key PTN - Digital Controls &Systems Engineering
31	Research team in Numerical Control and Measurement	University of Technology, University of Science, National-Key PTN - Digital Controls & Systems Engineering
32	Research team in Machine Manufacture	University of Technology
Electrics - Electronics		
33	Research team in Solar System	University of Technology
34	Research team in Electronics and Telecommunication	University of Science, University of Technology
35	Research team in IC Technology	IC Design Research and Education Center
Energy		
36	Research team in new energy technology, renewable energy and transformation	University of Technology
Materials Science and Technology		
37	Research team in MOF Materials	University of Technology, University of Science, Research Center for Nano-Structural Materials and Molecules
38	Research team in molecular materials and nanostructures	VNU-Key PTN – Materials Structure Research, Research Center for Nano-Structural Materials and Molecules
39	Research team in nanotechnology and applications	Institute for Nano Technology, National Key PTN - Polymer Materials & Composites, VNU-HCM Key PTN – Materials Technology
40	Research team in Biomedical Polymer Materials	VNU-Key PTN Materials Technology
41	Research team in Electrochemistry-Catalysis-Renewable Energy	VNU-Key PTN Applied Chemistry, University of Science

LIST OF THE FACULTY AWARDED WITH THE TITLES OF PEOPLE'S TEACHER AND MERITORIOUS TEACHER IN 2017

Order	FULL NAMES	POSITION	WORK PLACE
I.	**People's Teacher**		
1	PROF. DR. Vu Dinh Thanh	Rector	University of Technology
2	ASSOC. PROF. DR. Ho Thanh Phong	Rector	International University
II.	**Meritorious Teacher**		
1	ASSOC. PROF. DR. Tran Thien Phuc	Vice-Rector	University of Technology

NON-STATE-FUNDED SCHOLARSHIPS IN 2017

University	**Total scholarship**	**Total Number**	**Total Value** (VND million)
University of Technology	63	781	4.464
University of Science	37	340	2.446
University of Social Sciences & Humanities	19	139	495
International University	7	17	238
University of Information Technology	16	90	738
University of Economics and Law	20	242	991
School of Medicine	9	31	182
Total			**9.554**
In written:	Nine billion five hundred and fifty four million dong		

LIST OF PUBLICATIONS IN INTERNATIONAL JOURNALS WITH ISI AND IMPACT FACTOR 1+

Stt	Tên tác giả, tên bài báo, tên và số tạp chí, trang và năm đăng bài	ISSN	IF
1	**M.L. Jamero, M. Onuki, M. Esteban, X.K. Billones-Sensano, N. Tan, A. Nellas, H. Takagi, N.D. Thao,** Small-island communities in the Philippines prefer local measures to relocation in response to sea-level rise, Nature Climate Change, 7, 581–586 (2017)	1758-678X	19.304
2	**Ha L. Nguyen, Felipe Gándara, Hiroyasu Furukawa, Tan L. H. Doan, Kyle E. Cordova, Omar M. Yaghi,** A Titanium–Organic Framework as an Exemplar of Combining the Chemistry of Metal– and Covalent–Organic Frameworks, Journal of the American Chemical Society, 138(13), 4330–4333	0002-7863	13.858
3	**Ha L. Nguyen, Thanh T. Vu, Dinh Le, Tan L. H. Doan, Viet Q. Nguyen, Nam T. S. Phan,** A Titanium–Organic Framework: Engineering of the Band Gap Energy for Photocatalytic Property Enhancement, ACS Catalysis, 2017, 7 (1), pp 338–342	2155-5435	10.614
4	**Tran Thi Minh Duc, Valerie J. Cavett, Vuong Q. Dang, Héctor L. Torres, Brian M. Paegel,** Evolution of a mass spectrometry-grade protease with PTM-directed specificity, Proceedings of the National Academy of Sciences of The United States Of America , 113(51): 14686–14691	0027-8424	9.661
5	**Nhat Hong Tran Nguyen, Truong Huu Nguyen, Yi-ren Liu, Masoud Aminzare, Anh Tuan Thanh Pham, Sunglae Cho, Deniz P. Wong, Kuei-Hsien Chen, Tosawat Seetawan, Ngoc Kim Pham,Hanh Kieu Thi Ta,Vinh Cao Tran, and Thang Bach Phan,** Thermoelectric Properties of Indium and Gallium Dually Doped ZnO Thin Films, ACS Applied Materials & Interfaces, 2016, 833916-33923	1944-8244	7.504
6	**Nhu Hoa Thi Tran, Jisoo Kim, Bach Thang Phan, Sungwon Khym, Heongkyu Ju,** Label-free optical biochemical sensors via liquid cladding modulation of waveguide modes, ACS Applied Materials & Interfaces, 2017, 9, 31478#31487	1944-8244	7.504
7	**Carlos Angelé-Martínez, Nguyen Thi Khanh Van, Fathima S. Ameer, Jeffrey N. Anker, Julia L. Brumaghim,** Reactive Oxygen Species Generation by Copper(II) Oxide Nanoparticles Determined by DNA Damage Assays and EPR Spectroscopy, Nanotoxicology, 11(2):278-288	1743-5390	6.428
8	**Hoai Nguyen, Huynh Kim Lam, Thanh Truong,** Migration and desorption of hydrogen atom and molecule on/from graphene, Carbon, Accepted	0008-6223	6.337
9	**Thuan V. Tran, Hanh T. N. Le, Hiep Q. Ha, Xuan N. T. Duong, Linh H.-T. Nguyen, Tan L. H. Doan, Ha L. Nguyen and Thanh Truong,** A five coordination Cu(II) cluster-based MOF and its application in the synthesis of pharmaceuticals via sp3 C–H/N–H oxidative coupling, Catalysis Science & Technology, 7, 3453-3458	2044-4753	5.773
10	**Linh H. T. Nguyen, The T. Nguyen, Ha L. Nguyen, Tan L. H. Doan and Phuong Hoang Tran,** A new superacid hafnium-based metal-organic framework as a highly active heterogeneous catalyst for the synthesis of benzoxazoles under solvent-free condition, Catalysis Science & Technology, 2017, 7, 4346-4350	2044-4753	5.773

11	**Thanh Van Tran, Hans Schnitzer, Gerhart Braunegg, Hai Thanh Le,** Development of an optimization mathematical model by applying an integrated environmental indicator for selecting alternatives in cleaner production programs, Journal of Cleaner Production, Volume 154, 15 June 2017, Pages 295–308	0959-6526	5.715
12	**The Nhat Phan, Thi Thanh Van Truong, Nhu Biec Ha, Phuoc Dan Nguyen, Xuan Thanh Bui, , Bao Trong Dang, Van Tuan Doan, Joonhong Park, Wenshan Guo, Huu Hao Ngo,** High rate nitrogen removal by ANAMMOX i nternal circulation reactor (IC) for old landfill leachate treatment, Bioresource Technology, Volume 234, June 2017, Pages 281–288	0960-8524	5.651
13	**Thanh-Tin Nguyen, Xuan-Thanh Bui, Vinh-Phuc Luu, Phuoc-Dan Nguyen, Wenshan Guo, Huu-Hao Ngo,** Removal of antibiotics in sponge membrane bioreactors treating hospital wastewater: Comparison between hollow fiber and flat sheet membrane systems, Bioresource Technology, Volume 240, Pages 42-49	0960-8524	5.651
14	**Phan-Bao, N.; Bessell, M. S.; Nguyen-Thanh, D.; Martín, E. L.; Ho, P. T. P.; Lee, C. F.; Parsons, H., Detection of lithium in nearby young late-M dwarfs, Astronomy & Astrophysics, DOI: 10.1051/0004-6361/201629785**	0004-6361	5.014
15	**Kim Linh Nguyen, Hoang Anh Nguyen, Otto Richterc, Minh Thinh Phama, Van Phuoc Nguyen,** Ecophysiological responses of young mangrove species Rhizophora apiculate (Blume) to different chromium contaminated environments, Science of the total environment, Volume 574, Pages 369–380	0048-9697	4.9
16	**DinhQuoc Tuc, Moreau-Guigon Elodie, Labadie Pierre, Alliot Fabrice, Teil Marie-Jeanne, Blanchard Martine, Eurin Joelle, Chevreuil Marc,** Fate of antibiotics from hospital and domestic sources in a sewage network, Science of The Total Environment, Volume 575, 1 January 2017, Pages 758-766	0048-9697	4.9
17	**Chen, W., Hao, H., Jong, M., Cui, J., Shi, Y., Chen, L., and Pham, T. M.,** Quasi-static and Dynamic Tensile Properties of Basalt Fiber Reinforced Polymer, Composites Part B: Engineering, Volume 125, 15 September 2017, Pages 123-133	1359-8368	4.727
18	**Mingxia Zhou, Le Nguyen-Minh Thong , Huynh Kim Lam, Bin Liu,** Effects of structure and size of Ni nanocatalysts on hydrogen selectivity via water-gas-shift reaction—A first-principles-based kinetic study, Catalysis Today, Volume 280, Part 2, 1 February 2017, Pages 210-219	0920-5861	4.636
19	**Dung Duc Tran, Gerardo van Halsema1, Petra J. G. J. Hellegers1, Long Phi Hoang, Tho Quang Tran, Matti Kummu, and Fulco Ludwig**, Assessing impacts of dike construction on the flood dynamics in the Mekong Delta, Hydrology and Earth System Sciences (HESS), DOI: 10.5194/hess-2017-141, in review, 2017.	1027-5606	4.437
20	**Phuong T.M.Ha, Binh T.T.Le, Trung C.To, Son H.Doan, Tung T.Nguyen, Nam T.S.Phan,** Synthesis of aryl-substituted pyridines via cyclization of N,N-dialkylanilines with ketoxime carboxylates under metal-organic framework catalysis, Journal of Industrial and Engineering Chemistry, Volume 54, 25 October 2017, Pages 151-161	1226-086X	4.421
21	**Duc T. Ha, Tam Q. Dang, Ngoc V. Tran, Thao N. T. Pham, Nguyen D. Nguyen, Tuan V. Nguyen,** Development and validation of a prognostic model for predicting 30-day mortality risk in medical patients in emergency department (ED), Scientific Reports, DOI:10.1038/srep46474	2045-2322	4.259

22	**Evaristus Chibunna Mbanefo, Ali Mahmoud Ahmed, Afaf Titouna, Ahmed Elmaraezy, Nguyen Thi Huyen Trang, Nguyen Phuoc Long, Nguyen Hoang Anh, Tran Diem Nghi, Bui The Hung, Mai Van Hieu, Nguyen Ky Anh, Nguyen Tien Huy, Kenji Hirayama,** Association of glucose-6-phosphate dehydrogenase deficiency and malaria: A systematic review and meta-analysis, Scientific Reports, DOI:10.1038/srep45963	2045-2322	4.259
23	**Trinh Thi Truc Ly, Ingrid Bakke, Olav Vadstein,** Correlations of age and growth rate with microbiota composition in Atlantic cod (Gadus morhua) larvae, Scientific Reports, 7, 1, pp 8611	2045-2322	4.259
24	**Le Thi Ly, Hung Nguyen,** Investigation of changes in structure and thermodynamic of spruce budworm antifreeze protein under subfreezing temperature, Scientific Reports, DOi: 10.1038/srep40032	2045-2322	4.259
25	**Nguyen D.D., Yoon Y.S., Nguyen N.D., Bach Q.V., Thanh B.X., Chang, S.W., Le H.S., Guo W., Ngo H.H.,** Enhanced efficiency for better wastewater sludge hydroly is conversion through ultrasonic hydrolytic pretreatment, Journal of the Taiwan Institute of Chemical Engineers, Volume 71, February 2017, Pages 244-252	1876-1070	4.217
26	**Tu V. Nguyen, Toan D. Ong, Anh H.M. Lam, Vu T. Pham, Nam T.S. Phan, Thanh Truong,** Nucleophilic trifluormethylation of aryl boronic acid under heterogeneous Cu(INA)2 catalysis at room temperature: The catalytic copper-based protocol, Molecular Catalysis (Formerly known as Journal of Molecular Catalysis A: Chemical), Volume 436, July 2017, Pages 60-66	1381-1169	4.211
27	**Quoc Tuc Dinh, ElodieMoreau-Guigon, PierreLabadie, FabriceAlliot, Marie-JeanneTeil, MartineBlanchard, MarcChevreuil,** Occurrence of antibiotics in rural catchments, Chemosphere, Volume 168, February 2017, Pages 483-490	0045-6535	4.208
28	**EmilieStrady, Quoc Tuc Dinh, JulienNémery, Thanh Nho Nguyen, StéphaneGuédron, Nhu SangNguyen, HervéDenis, Phuoc DanNguyen,** Spatial variation and risk assessment of trace metals in water and sediment of the Mekong Delta, Chemosphere, Volume 179, July 2017, Pages 367-378	0045-6535	4.208
29	**Son Tung Ngo, Huynh Minh Hung, Duc Toan Truong, Minh Tho Nguyen,** Replica Exchange Molecular Dynamics Study of the Truncated Amyloid Beta (11-40) Trimer in Solution, Physical Chemistry Chemical Physics, Vol. 19 (3), pp. 1909-1919	1463-9076	4.123
30	**Ho Trong Thi, Phan Bach Thang, Kawazoe Yoshiyuki, Le Minh Hung,** Atomistic Observation of the Collision and Migration of Li on the MoSe2 and WS2 Surfaces through Ab Initio Molecular Dynamics, Physical Chemistry Chemical Physics, 2017, 19, 27332-27342	1463-9084	4.123
31	**Fethi Khaled, Binod Raj Giri, Milan Szori, Tam Mai, Huynh Kim Lam, Aamir Farooq,** A combined high-temperature experimental and theoretical kinetic study of the reaction of dimethyl carbonate with OH radicals, Physical Chemistry Chemical Physics, 2017, 19, 7147-7157	1463-9084	4.123
32	**Tien H. N. Lo, My V. Nguyen, Thanh N. Tu,** An anchoring strategy leads to enhanced proton conductivity in a new metal-organic framework, Inorganic Chemistry Frontiers, 2017, 4, 1509-1516	2052-1553	4.032
33	**Tan L. H. Doan, Thong Q. Dao, Hai N. Tran, Phuong H. Tran, Thach N. Le,**		

	An efficient combination of Zr-MOF and microwave irradiation in catalytic Lewis acid Friedel–Crafts benzoylation, Dalton Transactions, 45, 7875-7880	1477-9226	4.029
34	**Alexander Assmann, Marc Struß, Franziska Schiffer, Friederike Heidelberg, Hiroshi Munakata, Elena V. Timchenko, Pavel E. Timchenko, Tim Kaufmann, Huỳnh Chấn Khôn, Yukiharu Sugimura, Quentin Leidl, Antonio Pinto, Volker R. Stoldt, Artur Lichtenberg, Payam Akhyari,** Improvement of the in vivo cellular repopulation of decellularized cardiovascular tissues by a detergent- free, non-proteolytic, actin-disassembling regimen, Journal Of Tissue Engineering And Regenerative Medicine, DOI: 10.1002/term.2271	1932-6254	3.989
35	**Tung Kieu, Bay Vo, Tuong Le, Zhi-Hong Deng, Bac Le,** Mining top-k co-occurrence items with sequential pattern, Expert Systems with Applications, Vol. 85, pp. 123–133	0957-4174	3.928
36	**K. Nguyen-Quang, H. Dang-Trung, V. Ho-Huu, H. Luong-Van, T. Nguyen-Thoi,** Analysis and control of FGM plates integrated with piezoelectric sensors and actuators using cell-based smoothed discrete shear gap method (CS-DSG3), Composite Structures, Volume 165, Pages 115-129	0263-8223	3.858
37	**T. Vo-Duy, D. Duong-Gia, V. Ho-Huu, H.C. Vu-Do, T. Nguyen-Thoi,** Multi-objective optimization of laminated composite beam structures using NSGA-II algorithm, Composite Structures, Volume 168, Pages 498-509	0263-8223	3.858
38	**Phan Thanh Bao Trung, Luu Bui Bao Ngoc, Phan Ngoc Hoa, Nguyen Ngoc Thanh Tien, Pham Van Hung,** Impact of heat-moisture and annealing treatments on physicochemical properties and digestibility of starches from different colored sweet potato varieties, International Journal Of Biological Macromolecules, DOI: 10.1016/j.ijbiomac.2017.07.131	0141-8130	3.671
39	**Pham Van Hung, Nguyen Thi Mai Huong, Nguyen Thi Lan Phi, Nguyen Ngoc Thanh Tien,** Physicochemical characteristics and in vitro digestibility of potato andcassava starches under organic acid and heat-moisture treatments, International Journal of Biological Macromolecules , 95: 299–305	0141-8130	3.671
40	**Mohanasundar Radhakrishnan, Nguyen Hong Quan, Berry Gersonius, Assela Pathirana, Ky Quang Vinh, Richard Ashley, Chris Zevenbergen. ,** Coping capacities for improving adaptation pathways for flood protection in Can Tho, Vietnam, Climate Change , DOI: 10.1007/s10584-017-1999-8	0165-0009	3.496
41	**Pathirana, A.; Radhakrishnan, M; Nguyen Hong Quan Zevenbergen, C,** Managing urban water systems with significant adaptation deficits - unified framework for secondary cities, Climate Change , DOI: 10.1007/s10584-017-1953-9) (SCI/SCIE,)	0165-0009	3.496
42	**Andrea Šagátová, Bohumír Zat'ko, František Dubecký, Tu Ly Anh, Vladimír Necas, Katarína Sedlacková, Márius Pavlovic, Marko Fülop,** Radiation hardness of GaAs sensors against gamma-rays, neutrons and electrons, Applied Surface Science, Volume 395, 15 February 2017, Pages 66-71	0169-4332	3.387
43	**Phuong Tuyet Nguyen, Vinh Son Nguyen, Thu Anh Phan Pham, Tan Nhut Van Le, Duyen My Le, Vy Anh Tran, Tuan Van Huynh, Torben Lund,** Nicotinic acid as a co-adsorbent in dye-sensitized solar cells, Applied Surface Science, 392 441-447	0169-4332	3.387
44	**Vy Anh Tran, Trieu Thinh Truong, Thu Anh Pham Phan, Trang Ngoc Nguyen, Tuan Van Huynh, Antonio Agresti, Sara Pescetelli, Tien Khoa Le, Aldo Di Carlo,**		

	Torben Lund, So-Nhu Le, Phuong Tuyet Nguyen, Application of nitrogen-doped TiO2 nano-tubes in dye-sensitized solar cells, Applied Surface Science, 399 515-522	0169-4332	3.387
45	**Tien T. T. Do, Uyen P. N. Dao, Huong T. Bui, Nguyen Thao Trang,** Effect of electrostatic interaction between fluoxetine and lipid membranes on the partitioning of fluoxetine investigated using second derivative spectrophotometry and FTIR, Chemistry And Physics Of Lipids, 207, pp 10-23	0009-3084	3.361
46	**Thanh T.Hoang, Tuong A.To, Vi T.T.Cao, Anh T.Nguyen, Tung T.Nguyen, Nam T.S.Phan,** Direct oxidative CH amination of quinoxalinones under copper-organic framework catalysis, Catalysis Communications, Volume 101, November 2017, Pages 20-25	1566-7367	3.33
47	**Ho Pham Huy Anh, Nguyen Ngoc Son, NT Nam,** Adaptive Evolutionary Neural Control of Perturbed Nonlinear Serial PAM Robot, Neuro-computing Journal, Volume 267, 6 December 2017	0925-2312	3.317
48	**Phu Hoang Dang, Hai Xuan Nguyen, Truc Thanh Thi Duong, Thao Kim Thi Tran, Phuc Thi Nguyen, Trang Kieu Thi Vu, Hung Chi Vuong, Trong Huu Nguyen Phan, Mai Thanh Thi Nguyen, Nhan Trung Nguyen, Suresh Awale,** á-Glucosidase inhibitory and cytotoxic taxane diterpenoids from the stem bark of Taxus wallichiana, Journal of Natural Products, 80, 1087-1095, 2017	0163-3864	3.281
49	**Phu Hoang Dang, Hai Xuan Nguyen, Hanh Hong Thi Nguyen, Thai Duy Vo, Tho Huu Le, Trong Huu Nguyen Phan, Mai Thanh Thi Nguyen, Nhan Trung Nguyen,** Lignans from the roots of Taxus wallichiana and their á glucosidase inhibitory activities, Journal of Natural Products, 80, 1876-1882, 2017	0163-3864	3.281
50	**Nhan Trung Nguyen, Phu Hoang Dang, Ngoc Xuan Thi Vu, Tho Huu Le, Mai Thanh Thi Nguyen,** Quinoliniumolate and 2H-1,2,3-triazole derivatives from the stem of Paramignya trimera and their á-glucosidase inhibitory activities: in vitro and in silico studies, Journal of Natural Products, 80, 2151-2155, 2017	0163-3864	3.281
51	**Mai Thanh Thi Nguyen, Tho Huu Le, Hai Xuan Nguyen, Phu Hoang Dang, Truong Van Nhat Do, Manabu Abe, Ryukichi Takagi, Nhan Trung Nguyen,** Two ring opened oxetane taxoids containing a C-20 benzoyloxy group from the roots of Taxus wallichiana Zucc, Journal of Natural Products, Volume 58, Issue 40, 4 October 2017, Pages 3897-3900	0163-3864	3.281
52	**Vu Hien Phan, Roderik Lindenbergh and Massimo Menenti,** Assessing Orographic Variability in Glacial Thickness Changes at the Tibetan Plateau Using ICESat Laser Altimetry, Remote Sensing, 9(2), 160-165	2072-4292	3.244
53	**Benjamin Cornet, Q. Ho Bang,** Air Emission Inventories for Smaller Cities in ASEAN region: findings and sensitivities, Air Quality, Atmosphere & Health, Vol10(07), Page 897-906	1873-9318	3.184
54	**Ho Quoc Bang, Vu Hoang Ngoc Khue, Nguyen Thoai Tam, Kristofer Lasko,** Air pollution emission inventory and air quality modeling for Can Tho City, Mekong Delta, Vietnam, Air Quality, Atmosphere & Health, Springer Netherlands, Volume 10 (48), Pages 1–13	1873-9318	3.184
55	**Sandra Costa-B#ddeker, Philipp Hoelzmann, Lê Xuân Thuyên, Hoang Duc Huy, Hoang Anh Nguyen, Otto Richter, Antje Schwalb, ,** Ecological risk assessment of a coastal zone in Southern Vietnam: Spatial distribution and content of heavy		

	metals in water and surface sediments of the Thi Vai Estuary and Can Gio Mangrove Forest, Marine Pollution Bulletin, Volume 114, no. 2, Pages 1141–1151	0025-326X	3.146
56	**Bao-Son Trinh, David Werner, Brian J Reid,** Application of a full-scale wood gasification biochar as a soil improver to reduce organic pollutant leaching risks, Journal of chemical technology and biotechnology, Volume 92(8), Pages 1928-1937	0268-2575	3.135
57	**Tran Le, Huu Phuc Dang, Van Hieu Le,** Determination of the optimum annealing temperature and time for Indium-doped SnO2 films to achieve the best p-type conductive property, Journal of Alloys and Compounds, Volume 696, Pages 1314-1322	0925-8388	3.133
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