

Overview

The Ho Chi Minh City University of Technology was officially established in October 1957 under the name of Phu Tho National Technical Center, of which Electrical Engineering School was among the first engineering schools founded. This school was among the first technique-educational facilities founded in South Vietnam before 1975 to train 2-year technicians, then 4-year engineers in the field of Electrical and Electronics and Telecommunications Engineering till 1975. After 1975, the school changed its name into the Faculty of Electrical and Electronics Engineering – one the faculties of Ho Chi Minh City University of Technology. The Faculty's mission is to provide undergraduate and graduate education and conduct research activities in the field of applied Electrical-Electronics Engineering and Technology for the benefit of the technological and economical development of the country's industrialization and modernization process. Graduate engineers from the Faculty currently play an essential role in different areas of the national industry in public and private companies. Some main fields conducted by the Faculty's engineers include:

- Power (produce, transfer, distribute, utilize electricity)
- Heavy industry and light industry
- Fuel
- Post – Telecommunication
- Information Technology
- Service (repair, install, reinforce, ...)

The Faculty of Electrical and Electronics Engineering has contributed a great deal of achievements in terms of technology and research activities to the economic development in the South Vietnam.



Chapter 1: Goals and aims

- To provide fundamental, general and specialised knowledges to students, as well as to upgrade latest technological informations in the field of Electrical and Electronics Engineering.
- To integrate course theory with practical experience.
- To provide opportunities to competent students to work in the labour market after their graduation.

The Faculty's aims and objectives are explicit and are popularised to staffs and students through staff meetings and via the Faculty's website. The Faculty's aims and objectives have always been checked, reviewed and adjusted periodically to tune the overall aims of the university and to response to the demands and needs of stakeholders.

Chapter 2: The Programme

2.1. The contents

The Faculty's curriculum is constructed on the basis of core programme issued by MOET. The curriculum complies with the missions, educational aims and objectives, functions and duties of the Faculty; the curriculum also tunes the demands and needs of students and labour market.

Teachers and administrators took part in constructing the programmes and curriculum for different training courses based on the core programme required by the Ministry of Education and Training (MOET).

Moreover, the Faculty's programme was constructed on the basis of not only the core programme of MOET, but also of the policies and instructions of University of Technology and Vietnam National University – HCM City.

- The number of credits for each training course is about 150 – 155 credits.
- The structure complies with the general regulations of VNU-HCM and of the University of Technology (the basic knowledge meets the requirements of MOET's core programme and is uniquely applied for all 3 fields of training in the Faculty, the specialised knowledge diversifies and ensures the fundamental professional skills of graduate students)
 - Each course syllabus is constructed by group of specific staffs and is evaluated by the Faculty's scientific committee before being presented to the Administration Board to get approval.

The curriculum is periodically reviewed and adjusted with the consideration of international standards, feedback opinions of stakeholders, employers, graduates, educational institutions ... to meet the demands of the labour market.

- Annually, the Faculty gathers contributive opinions to the curriculum from business organizations (through job interviews) and from students (through graduation process).
 - The curriculum is reviewed every three years.
 - Students' opinions are collected by means of students' meetings, supervisors' or counselors' meetings and via the answer sheets delivered to students to get their opinions towards the curriculum.

The curriculum is designed in an appropriate way to connect different levels, different ways of training, and other schools.

At present, there are regulations issued by University of Technology and the Faculty. These regulations allow the Faculty to conduct different training connections.

- *Connections between under-graduate and Master programmes:* The Faculty has regulations to let under-graduate students to further their studies into post-graduate programmes, to change their majors from technical department into business management department, to study complementary knowledge among related fields, to equivilise between full-time and part-time curriculum, preparing for the intake post-graduate examinations.
- *Connections between Master and Doctoral programmes:* There are also regulations to transfer Master students into Doctoral programmes.
- *Connections between Master programme and post-graduate subject-certificated programme:* The post-graduate subject-certificated programmes comply to the standards set for Master curriculums. The Faculty recognizes subject certificates for the course waiving in the Master programmes.
- *Connections between some courses in the Master programme of the Faculty and those of other sister foreign universities:* The Faculty designs credit curriculums with some obligatory subjects and many optional ones in accordance with different disciplines. Some of these subjects could be transferred to the corresponding courses in foreign universities.
- *Connections with other Colleges, Universities including schools outside VNU-HCM for the part-time under-graduate programmes (waived intake examinations).* The Faculty considers to let graduate students from other university with the same or different majors to continue to study in the Faculty.
- *Connections in second degree of under-graduate training:* The credit curriculum allows students to study or transfer their courses to get 2 B.A. degrees at the same time or let them study the second degree of under-graduate programme after their graduation from other schools.
- Annually, a great number of Faculty's students is transferred to study in other schools through many channels such as "scholarships or self-finance abroad studying". However, the number of students from other universities to study in the Faculty is small because of the difficult current recruiting regulations.
- *Other special connections and collaborations in training:* The *PFIEV* programme is the France-Vietnamese collaboration between the 4 Vietnamese schools and 4 French school partners (03 universities of technology and 01 university of construction); the AUF course is transferred into countries of French speaking community if students obtain good results in their study; the Twinning programme 2 + 2 of the Center of Overseas Studies.
There are also many students exchange programmes with other countries: Students from France, Australia ... to study and to do training practise in the Faculty. The Faculty's students collect credits from their study in Singapore, Malaysia, etc.

2.2. The organization of the programme

The programme has clear and concrete objectives, appropriate structure and systematical design which can meet the demands and needs of knowledge and skills from each training levels and labour market.

The Faculty's training courses

There are many undergraduate training programmes in the Faculty: Full-time undergraduate courses including undergraduate classes, honour classes in Automation, Vietnam-France honour classes in Power and Telecommunication, Modernised Programme classes in which English is the unique teaching language, Industrial training programme for the Power 2 company, ...

Part-time training includes classes of short-term courses held in evenings, on-place classes in other local areas, certificate-classes for specific fields of informatics, power (technicians), or classes from the request of business companies.

The structure of the undergraduate programme of the Faculty of Electrical and Electronics Engineering

The overall structure of the curriculum: 156 credits (excluding the courses of physical and military training)

Table 1: Distribution of knowledge in the programme:

No	Knowledge	The number of credits		Overall number	The ratio on the whole training programme
		Obligatory	Optional		
1	General knowledge.	50	0	50	32%
2	Knowledge of physical and military training	No credits (equivalent to 12 study-hour credits)			
3	Professional knowledge, which includes	100	6	106	68%
3.1	<i>Basic knowledge</i>	60	0	60	38%
3.2	<i>Specialised knowledge</i>	30	0	30	19%
3.3	<i>Optional knowledge</i>	0	6	6	4%
3.4	<i>Final thesis and dissertation</i>	10	0	10	7%

2.3. Didactical concept

Training activities are designed flexibly to activate students and to improve education quality and effectiveness. The Faculty is diversifying training courses complying with appropriate standards in order to meet the demands of the applicants.

Many types of learning courses and curricula are now in use at the Faculty (Official, part time, honour programme, Vietnam-France high quality classes, classes for specific purpose ...)

The Faculty is applying the methods of recognizing study results according to credit-based system (accumulating credits); changing from semester training into credit training.

Reforming teaching and learning methods in order to facilitate students' self-learning, research and cooperative learning environment.

The Faculty is gradually applying new training methods (group learning, project conducting, thesis or dissertation writing, project reporting).

The research activities are not conducted popularly to all subjects but to only some active groups of students. One of the common research activities is minor thesis reporting or writing as a post-graduate course assessment. Students must look for informations and reference books from library, do their theoretical learning, evaluation, simulation and experimental practices. One impressive practical activity of Faculty's students is the participation to the ROBOCON (Robot Contest) annual competition, organised within the East-Asia countries. Research activities are focused specifically for final-year students. A great number of students' projects have been applied for exhibitions, school's awards, and MOET's awards (Vifotec award, Youth innovation award, Eureka award...). Some students are encouraged to post their research projects on proceedings of Faculty's and international conferences. Many research results have been used as references for succeeding promotions.

Some subjects such as practical experiments, graduation training practice are constructing practical knowledge necessary for the curriculum and getting a proportion in the whole programme.

Practice in training programme includes:

- **Graduation internship**: graduation internship is designed adapting to each specialised curriculum. This programme includes inside and outside school practical activities. For example, in Electrical course, the outside school practical internship are conducted in manufacturing factories or power companies in order to provide to students real experiences, observations and applications. All students are led and supervised by the Faculty's staff, controlled by local administrators in these practical activities. Students have opportunities to work and communicate with real facilities. The contents, place and time of internship are set up by supervising teachers at the beginning of school years. At the end of each internship phase, students must write and defense their reports before a scientific committee. Internship is a compulsory condition for students to get permission to take graduation thesis or dissertation.
- **Course projects**: Each student must carry out 2 projects during their studies. Students get experience in calculating, or conducting simple designs. At the end of the semester, students must defense their projects before the scientific committee and get their final evaluation marks.
- **Workshops**: there are 2 periods for professional practice at electronic and electric workshops. At the end of the semester, students will get accumulative marks.
- **Graduation thesis or dissertation**: students will be assigned their thesis or dissertation in the last semester. Students can register their own topics for graduation thesis (they can choose their supervisor) or the Faculty will assign

teachers to be supervisors. Some students can select supervisors from other universities. For some experimental theses, students can be given a period of time to get survey materials from companies, for the remaining time, students work at the school to calculate, design and create plans. Students must take part in 2 defense sessions: in the middle and at the end of the last semester. Students who finish their work requirements in the middle of the semester will continue to complete their following stages.

2.4. Student Assessment

Assessment methods and processes are diversified in order to ensure their validity, reliability, fairness and correspondance to the aims and aspects of the curriculum as taught; Assessment must be used to assess students' levels of knowledge accumulation in specialist contents, practical skills, ability to discover and problem solving.

Students' results are announced officially, appropriately and are kept safely in correct order. Graduation degrees and certificates are issued according to the regulations.

Assessment procedures:

- **Theory course assessment:** mid-term tests (usually weighing 20%) and final test at the end of semesters (weighing 80%). The content of the assessments and examinations covers the whole curriculum with clear marking scale. The course content and the assessment procedure are introduced in detailed introduction of course (available on the Faculty's website and Administration office) and are informed to students at the beginning of each semester. Assessments are conducted very tightly. Depending on each course, there will be 1, 2 or 3 different test papers. This is because of crowded classes or different alternates of test papers (multiple-choice tests). During the time of mid-term tests, students of the same school year are allowed to study at home (no class) in order to ensure sufficient time for reviewing. Mid-term marks are announced to classes within 1 week after the test, and students can check their results from the website.
- **Assessments for practical subjects:** Most of practical and training subjects are assessed by average marks from all practice tasks.
- Some experiments require students to perform their task at the end of the semester.
- **Assessments for graduation internship:** students must participate in a required number of training sessions, and must report their projects to the assessment committee.
- **Methods of assessment:** writing or multiple-choice tests depending on each subject. The allotted time is 60, 90, 120 minutes depending on the number of credits per course. The test may be document open or closed. All test papers are consistent to all classes of one subject in the same semester.
- **Minor thesis report or thesis defense assessment:** this method is mainly applied to post-graduate students and carried out by Post-graduate office. The contents of assessment usually focus on the depth of specialisation. Due to the small number of post-graduate students, and the large amount of reference sources in the library and website, students can have a wide selection in their thesis topics. This procedure requires the supervisors to work harder for the exact assessment.
- **Project assessment-** Projects are assigned to students in all specialised fields. The number of students complies with the number of teachers in each course. The assessment is conducted by one reporter or a group of reporters (2 reporters) in order to ensure the fairness of marking.
- In addition, the Faculty also applies some other assessment methods as follows:

- + Giving additional marks for students who participate in seminars and contribute ideas on classes (depending on each teacher).
- + Giving additional marks for research activities which win awards (according to the regulation of the Administration office)
- + Giving maximum marks (10) for graduate students who have papers published on professional magazines. If students do not have any articles, the highest marks for graduation thesis is only 9.

Strong points: The curriculum consisting of theoretical and practical courses is consistent and is regularly upgraded. Laboratories are always improved and invested. Generally, students assessments are in accordance with the Faculty's regulations. The Faculty usually follows up and checks students' feedback from Students' Assistance office, Under- and Post-graduate office, Administration office. Corrective actions are made where necessary.

Chapter 3: Input

3.1 STUDENT

Table 2: *The overall number of students from 2000 to 2005*

School year (1)	Overall number of students (for all kinds of training programmes) (2)	Number of students in each programme		Percentage on whole intake number	
		Full-time (3)	Part-time (4)	Full-time (5)	Part-time (6)
2000- 2001	1058	578	480	54.63%	45.37%
2001-2002	827	538	289	65.05%	34.95%
2002-2003	1050	627	423	59.71%	40.29%
2003-2004	1166	595	571	51.03%	48.97%
2004-2005	1050	600	450	57.14%	42.86%

- The number of students (full and part-time) is steadily increasing each year. The annual number of students is identified basing on the teaching load of teachers in each department. Recently, this number is higher because the Faculty opens new courses in Automation for part time training. However, in the near future, the Faculty is intending to maintain full-time under-graduate training, gradually replace the Part time training by distance-training, and gradually increase the number of Master and Doctoral students.
- The intake mark of the Faculty is usually higher than that of the standard intake level of other universities which were resulted during a common nation-wide intake contest held every year by MOET (in the school year 2006 – 21marks; 2005 –25marks; 2004 -22.5 marks- data from Academic office). This intake mark is selected in a descending way, from the highest to the lower points with the priority for best students in international examinations, and in local areas (according to MOET's regulations). With the tendency of improving the training quality and research activities, the Faculty will not increase the input number but try to look for methods to improve training quality, to open high-quality classes (Vietnam-France high-quality classes, classes of Automation, Power, classes collaborating with Nagaoka University-Japan). Students of the first two Vietnam-France high-quality promotions have graduated: some students are asked to be

teaching assistants at the Faculty, some are selected and continue their study in Master of Science and Ph.D. programmes in France, the rest are working at national and international companies. The Bachelor of Engineering degrees of these classes are recognized by French Engineering Association.

Study load

- A credit-based educational system has been implemented in the Faculty since 1993 until now. Credit regulations are regularly adjusted, amended to adapt to training conditions and changing curriculum. These regulations are constructed, based on contributive opinions from staffs, students after some time of operation. (Regulations of credit training, amendations ...- Academic office). The number of credits that each student is allowed to register every semester is restricted. The time distribution of learning course in a year is rather appropriate. In the final years, the study load of practical and experimental courses increases because students have changed into specialist stage. However, the study load is mainly from graduation thesis. The Faculty also organizes yearly supplementary semester with limited subjects to help students reduce their study load during the two main semesters. This solution helps increase the speed of study and avoid the repetition of studying time table.
- Students who study seriously through all semesters may finish the programme within the required time and may defense their thesis in four and a half year (45% of the overall number of students) or in five years (29%).

Counseling and Advice

- Methods of counseling and advice:

In University of Technology – HCM City, all students are informed and instructed at the entry about the training objectives, curricula, and assessment requirements. All the informations can be found in Annual summary, Handbooks for students, brochures delivered to students at the beginning of each new school year. The University also has ***Local Internet Network, website, addresses and accounts provided to students to access Internet freely***. All of the above informations are regularly upgraded and posted on the Internet. Students can check their ***personal timetable, test results ... from the University Website***. Students can also ask for ***information related to their study and testing*** by sending emails and getting replies from the Administration office, Students assistance office, Departments, supervisor teachers, Association committees...

- *Students Assistance Center* provides supports to students with information related to study, testing, summer study, problems in marking, etc. The Faculty of Electrical and Electronics Engineering assigns a Vice-Dean to be in charge of students' affairs. In each division, there are also people in charge of contacting and solving for students' requirements.
- In addition to the above source of information, other informations about training and careers ... of the Faculty of Electrical and Electronics Engineering are also posted on the Faculty's website at the address: www.dee.hcmut.edu.vn, and the brochure (both in Vietnamese and English). Students can get informations about their learning subjects, teachers, and textbooks by accessing the Internet or by sending emails. Contact addresses of teachers and staffs are also introduced on the Faculty's website.

- At the beginning of specialised phase (semester 3 and 4), the Faculty organizes meetings with all students in order to provide informations about administration, training contents, and to answer students' questions.
- ***The Faculty of Electrical and Electronics Engineering has a staff of supervising teachers acting as learning counselors.*** These teachers are assigned to organize learning activities, to give advices and to check students' progress. These teachers' rights and duties are set in MOET's and Faculty's regulations. They are in charge of informing and counseling all the above contents to students. *It is the adequate information, necessary forms, explicit and effective system of administrating, controlling and supporting that students can understand clearly the training objectives, curriculum, assessment requirements and can better realize the aims of the curriculum, teaching and learning regulations, then they can bring that kind of knowledge into reality. This is an important step that the Faculty has applied from 1993.* Due to complete understanding of the students' demands, the supervising teachers can give their counseling opinions to the Faculty's Administration Board to solve learning problems.
- During the time of conducting graduation training practice, graduation thesis, students are allowed to work at laboratories, computer labs or are provided papers of introduction to companies to collect data, to conduct observation. Students get the schedule to work with their supervisors weekly. Students who can develop their graduation thesis into research projects will get financial aids from the University of Technology.
- The credit point system allows students to change their curricula. If there are some particular situations from the students, the Faculty will pay special consideration and get opinions from other responsible members.
- Annually, the Faculty of Electrical and Electronics Engineering gives scholarships to students from the source of alumni and other organizations. Some scholarships are given to best students (basing on the results provided by the Academic office and training achievements); some other scholarships are given to poor students.
- Job counseling: job information is posted on the Faculty's website and posters at all departments. Students can also look for job information from seminars held by companies, from job fairs, scholarship meetings, etc.

3.2 STAFF

Staff management

The annual staff recruiting plan:

- Policy: Recruiting Doctor and Master graduates and best undergraduate students to be teaching assistants or lecturers (teaching both theory and practice)
- Procedure: All the departments announce their recruiting plans, interviews, required application forms to everybody. The Faculty's recruiting committee will consider qualified applicants and send the list of selected applicants to the Personnel office of the University of Technology.
- The Faculty assigns senior lecturers to instruct and supervise new recruits (preparation for teaching, teaching demonstrations, experiment instructions, and research practice ...).

The Faculty develops plans to improve young lecturers annually. The Faculty also assists Ph.D. students with national fund.

Ensuring democratic rights for teaching staff:

- Publicizing policies of training, research and financial assistance ...
- Publicizing annual financial report and related documents of the Faculty.
- Delivering necessary informations to all teaching staffs (official memoranda, emails, meetings, unions ...)
- Organizing weekly meetings for the Faculty's leaders, and monthly for Departments' leaders.
- Organizing annual Staff meetings and Union meetings.

Encouraging cooperation and exchange programmes with teachers from other schools:

In 2004, the Faculty appointed 05 lecturers to go abroad to conduct research (ENSISA University (Haute-Alsace) - France, Ulsan University - Korea, San José University – the USA, Chulalongkorn University - Thailand,...). The Faculty has appointed 08 young lecturers to follow Ph.D. studies in foreign universities using different sources of scholarships. In 2005, the Faculty sent 09 lecturers to go abroad for their study (Hosei University, Lausanne University - Switzerland, Nagaoka University - Japan, AUN-SeedNet Conference - Thailand, Scientific conference in Malaysia,..). The Faculty has organized seminars for many foreign professors (2 American professors, 3 Australian professors, 3 Japanese and Korean professors). In 2006, the Faculty sent 8 lecturers to go on business and exchange programmes with Illinois University (the USA), Hosei University (Japan), Saint-Cyr University (France) and many other young lecturers to study Ph.D. programmes in foreign countries. The Faculty has also received and welcomed many foreign professors and experts to come and organize seminars in the Faculty.

Establishing competent teaching staff:

- The Faculty's Committee Board include pretigious and competent lecturers.
- The Faculty has sent 6 lecturers to study Education Management at the School II of Staff Training/Administration Center. All the members of the Faculty's Committee Board are among these 6 lecturers.

Size of the Staff and the Qualification

The number of lecturers who particitpate in research activities:

- The number of lecturers who own 01 research report: 70
- The number of lecturers who own 02 research reports: 50
- The number of lecturers who own 03 research reports: 30
- The number of lecturers who own 04 research reports: 10
- The number of lecturers who own more than 05 research reports: 4

The number of lecturers who particitpate in compiling and writing books/textbooks/teaching materials:

The data is from 2000 to June/2005

- The number of lecturers who participate in writing 01 teaching material: 15
- The number of lecturers who participate in writing 02 teaching materials: 10
- The number of lecturers who participate in writing 03 teaching materials: 4
- The number of lecturers who participate in writing 04 teaching materials: 2
- The number of lecturers who participate in writing more than 05 teaching materials:

Table 3: *The Faculty's size of the staff (indicating lecturers who directly participate in teaching at the Faculty in the last 5 years)*

	2001	2002	2003	2004	2005
Overall number	117	125	119	115	117
Associate Professors	01	02	03	03	03
Doctors	20	21	19	22	22
(%)	17.1%	16.8%	16%	19.1%	18.8%
Female lecturers	17	19	14	15	15
(%)	14.52%	15.2%	11.7%	13.04%	12.8%
Full time lecturers	81	80	89	76	81

Table 4: *Staff/student-ratio and staff/graduate-ratio (mentioned only on full-time and part-time students)*

	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005
Yearly staff/graduate-ratio	117/958 (1:8.18)	117/1183 (1:10.11)	125/1171 (1:9.368)	119/728 (1:6.117)	115/852 (1:7.40)
Staff/student-ratio	118/3012 (1:25.5) the average number of staff divided by the overall number of students in the last three years.				

3.3 FACILITIES AND INFRASTRUCTURE

Classrooms

There are 01 lecture-room, 07 Departments' laboratories, 03 Faculty's laboratories, some practice laboratories supported by foreign associations (01 laboratory of micro-circuit supported by Hosei University, 01 practice room supported by Schneider corporation, Experiment Module of Telecommunication and Power supported by PFIEV programme, and some other facilities supported by companies). The Faculty also sets up 01 seminar room (7.5mx10.5m) and 01 Conference Hall.

Library

At present, each Department equips its own library with reference books and facilities. Most of the reference books are in foreign languages, mainly in English. Reference books are from different sources such as foreign purchasing, donating, individual contributing, etc. Regarding of the requirement of 60-105 books for each training course, most of the departments can meet this standard.

The Faculty also has plans to construct a library for the whole Faculty. However, there are actually many difficulties in terms of the location and finance.

At present, the Faculty is using the IEL library of VNU-HCM with specialist books and magazines. All the tasks of managing, delivering information to the Faculty's members are conducted conveniently through the Faculty's WAN network.

Specifically, in 2006, the Faculty launched the Modernised Programme assigned by MOET, and with the operating budget, the Faculty was invested books and reference materials for staffs and students.

Laboratories

The Faculty has currently 3 central laboratories: 01 lab for Power practice, 01 lab for Electronics practice, and 01 computer room. There are 07 Departments' laboratories: 01 lab for circuit and measurement, 01 lab for Telecommunication, 01 lab for Electronics, 01 lab for Automation, 01 lab for Power system, 01 lab for Electrical techniques, and 01 lab for Industry Power. All the laboratories at the Faculty can meet the requirements of basic practising and experimenting. There are separate regulations applied in every laboratory and these regulations are instructed to students at the beginning of the course. There is also 01 fire-tool in each laboratory. The facilities in each laboratory include materials for instruction, designs for practice, measurement tools, report forms. The annual finance provided for the laboratories must satisfy the necessary requirements.

In some laboratories, students can use softwares and other modern facilities to serve their study. However, in order to improve and upgrade the training and research activities, these laboratories should be continuously invested and equipped with modern facilities.

Facilities

Serving for teaching: The Faculty has purchased 03 projectors and 04 laptop computers to serve teaching and learning activities. Some laboratories have been equipped with overhead projectors (Electronics laboratory). All lecturer-rooms and laboratories are equipped with computers where the demands and needs are very high. However, the number of projectors is very small and cannot meet the standards of teaching and learning activities.

The Faculty tries to provide sufficient informatic facilities to support teaching and learning activities, research, management and administration.

At present, the Faculty has provided staffs and students with adequate computers. There is at least one computer connecting to the Internet at each department and laboratory. The Internet and intranet are managed by WAN office. In each department, there is one young technician in charge of posting information on the website. The Faculty's Internet is currently working with high stability. However, due to the needs of developing new softwares, to the downgrading situation of computers and facilities, the investment to improve and purchase new computers is very urgent.

The Faculty has sufficient classrooms

Some departments need larger working places to meet the needs of studying and researching of staff and students. The number of lecturers in the Faculty is already big, besides, the other foreign activities are developing. Therefore, the Faculty needs one seminar room big enough for 50-80 lecturers, and one standard international guess room. In addition, the needs of working stations being able to access to Internet for post-graduate students are also very urgent.

The Faculty has plans to improve and develop the infrastructure to support the effectiveness of teaching and learning activities, research and other Faculty's activities.

- The collaborating programme with Power company to train engineers.
- The collaborating programme with Hosei University to exchange lecturers yearly and to equip laboratories on microelectronics, using the fund of professor Tamaki.
- The Vietnam-France high-quality training programme.
- The collaborating programme with Schneider corporation to provide automation facilities and to train experts.
- The collaborating programme with Nagaoka University (Japan) to transfer students to study in Japan.
- The programmes of supporting facilities from Leader Corporation (Japan), Motorola, OMRON. Several research projects have been launched in the collaboration with the Power companies.
- At present, the Faculty is planning to construct Telecommunication laboratory with the total amount of capital 500.000USD. In the collaborating programme to train experts for Power companies, the Faculty also signed contracts to receive 01 billion VND to work within 5 years. In the coming years, the Faculty is planning to conduct 02 big projects of constructing 02 laboratories serving embedded systems and power electronics.

Annually, some Faculty's lecturers participate in training programmes to prepare for labour safety, fire-fighting and internal security.

3.4 Internal Quality Assurance System

The Quality Assurance System of the Faculty has been maintained by the Faculty's Board of Administrators, Scientific Committee, Heads of Departments, Heads of laboratories and divisions. A Quality Assurance group has been established in order to support the self-evaluation, accreditation and quality assurance inside the Faculty.

3.4.1. *Input: policy and process of quality assurance*

Criteria:

The Faculty always considers the quality assurance activities as one of the most important tasks. These activities are conducted via clear and explicit policies, with the appropriate process shown in concrete programmes, curricula, and other activities. All the activities are announced publicly. All the procedures of the quality assurance activities are rigidly followed and applied in the Faculty.

Explanation:

In order to meet the challenges of the new era of advanced technology, the objectives of the Faculty are to develop and maintain the environment of training highly qualified engineers of Electrical and Electronics. The Faculty always tries to upgrade and improve the training programme in connection with practical experience. By means of educational strategies which apply the learner-centering approach, encourage and support research activities and foreign collaboration, the Faculty is developing into a higher level of academic education to integrate into the higher education regionally and internationally.

The Faculty also designs appropriate and explicit policies and procedures to all related people. These procedures are conducted under the curriculum, course outlines following the core programme of MOET. All the curricula of the Faculty are revised every 5 years by the Faculty Board before being submitted to the University Board.

The credit points system allows students to flexibly arrange their study, curriculum and progress appropriately. The Faculty, through forums, periodical meetings, opinion sheets, collects students' opinions related to the curriculum and other activities every year. Then, the Faculty will present suggestions to the University to have corrective modifications.

Besides, the Faculty also has particular policies related to the textbooks, materials and other facilities served for the teaching and learning activities. The Faculty requires each department to establish its own textbooks and reference books for theoretical courses, to install lab experiments, and timetable for practical training. All these above works can be activated by means of libraries, departments' websites, and the Internet.

The Faculty also has many other organizations supporting and giving help to all related people. These organizations are Party groups, Youth unions, Students associations, clubs ... All of the Faculty's supervising teachers, teaching assistants always give counselling and advice to students whenever necessary.

Students' learning results are always announced to students and parents by means of marking reports or on individual web-address. The students' selective process is regularly conducted. Any students who cannot meet the requirements of the curriculum have to change their status, or otherwise to dropout. The training effectiveness and quality are confirmed with the statistics of graduate students and job applicants. This ratio is informed to everybody and is usually adjusted to meet the requirement of business reality. Currently, the graduation degrees issued by the Faculty are recognized and highly appreciated from stakeholders.

At present, the Faculty is carrying out the accreditation process and the internal quality assurance process in order to get international recognition.

3.4.2. Monitoring system

Criteria:

The Faculty has an effective monitoring system which is in charge of collecting and synthesizing reliable feedbacks related to quality assurance activities from many different sources. These feedbacks will be the foundation for the Faculty to evaluate the belief and prestige from students, parents, employers, partner companies and related stakeholders. These feedbacks are also an important source of information to the effective adjustment of the Faculty's training curriculum.

Explanation:

The Faculty's current student monitoring system is working effectively and conveniently. All the learning results of students are saved in the data center of the Academic office. These data can be accessed individually by students, administrators, and parents. Students can get the results related to course registration, test results... by accessing the internet using students' identification number. Parents can also check their children's learning and then have effective methods to give recommendations. The monitoring system is also conducted by one administrative body including one Vice-Dean, one assistant and several secretaries, some academic counselors, supervising teachers of each class (40 to 100 people per one class). The monitoring system is also conducted by supervising teachers to check students' studying progress every year.

With freshmen, the Faculty keeps all necessary personal informations. However, with the credit points system, it is very difficulty to organise students' extra activities. To solve this problem, the Office of Political affairs collaborate with the Youth union,

student association, classes, and supervising teachers to manage students' social activities.

In each course, the teacher in charge is responsible for monitoring and instructing students. The students' learning results including mid-term and semester marks are reflected in the final up-to-date marks report. In addition, students also have marks for their effort in studying and practising. At the end of each semester, basing on the students' records, the Faculty will give awards, and scholarships to the best students, and warning notices to students having unsuccessful results. In case of students who cannot meet the minimum academic standards, the Faculty will give recommendations to change the training process or to change their studying status. Every semester, the Faculty summarizes and evaluates the ratio of graduate/dropout and other learning results. All the above data are saved in the Faculty and the Academic office.

At graduation time, the Faculty makes statistical analysis and provides the data of graduates who have jobs right after their graduation. A good bridge among graduates, the Faculty, and society is the Faculty's alumni association. This association usually organizes periodic meetings on November 20th (the National Teacher's day), and other big holidays. In addition to collecting donations for scholarship fund, the alumni association also helps exchange and provide informations of all kind to students. The Faculty also gets useful feedbacks related to the training curriculum from the alumni association.

Annually, the Faculty organizes many activities establishing relationships with industries. Beside the programmes of collaborating in research activities, introducing new technologies, mutual visiting, giving scholarships or facilities, the Faculty and industrial companies pay great attention to the recruiting Faculty's students to be employees. Grace of these activities, the Faculty can have correct informations about the job and about the ability of students after their graduation which are good reference sources to adjust the curriculum and training scope.

As for lecturers, the Faculty collects and announces lecturers' reports, research papers, scientific collaboration (with evidence) in the Faculty's handbook and brochure. The textbooks, reference books and research reports are also collected and summarized annually. Conference's proceedings, scientific magazines, research files are made public and saved in the data center of the Faculty.

Annually, the Faculty receives national and international collaborating programmes from which the Faculty can get benefits and support from these activities. These activities are reported in the annual staff meetings (once a year). After a steering time, all the products of these programmes are saved in the data center or in the Faculty office.

The Faculty's monitoring system has worked effectively, and has won confidence in students and all stakeholders. This system is also the basis which helps the Faculty to continuously adjust the training activities to meet the demands of social development.

3.4.3. Periodic core activities evaluation

Criteria:

The Faculty is conducting some official procedures to periodically review and evaluate core activities in terms of training curriculum, and qualifications. These procedures are based on the curriculum evaluation of faculty staffs, of stakeholders and of students. The results of this evaluation reflect accurately students' learning ability and reinforce the trust in students and other related stakeholders.

Explanation:

Student assessment

At present, the Faculty uses consistent standards to assess students. Students' learning results are evaluated through mid-term, final tests (composition or multiple-choice tests), practice exercises, presentation assignments, minor thesis, reports, dissertations ...The evaluation process is conducted by teacher in charge (scientific committee to evaluate thesis). Based on the test results, students' opinions, the Faculty will have necessary adjustments aiming at fair evaluation. At present, most of students' evaluation processes reveal concurring and give confidence in students. All the evaluation procedures can also be flexibly adjusted at the beginning of each semester and be reviewed by the Faculty's scientific committee every five years.

As for the assessment of practice and other activities, according to the new regulations of MOET, the Faculty is currently implementing and adjusting the mark system to tune the assessment procedure more realisable.

Course and curriculum evaluation

The training curriculum is regularly reviewed and upgraded to meet the changing technologies and social demands. In general, the curriculum is designed following the MOET's core programme. At university level, some courses have been adjusted and generalised within the whole university (the Industrial Administration, English programmes, for example).

At Faculty's level, the course evaluation is regularly conducted by the subject group or by teachers in charge. Appropriate adjustments will be made to suit the course contents, tests, exercises, experiments, thesis and dissertations. Student roles will be the center for any modifications and improvements. Considering the test results, students' opinions, the Faculty will have necessary adjustments aiming at fair evaluation, appropriate course contents, teaching methods.

At course level, most contributive opinions of teachers, students, alumni, stakeholders and from other universities are seriously considered by departments. These opinions will help have corrective adjustments in terms of course length or contents, or new courses suggested. All the above results will be presented in the meeting of the Faculty's scientific committee. Then, the Committee will make decisions and suggestions to the University.

Recently, the course and curriculum evaluation is paid greater attention by the University and Vietnam National University-HCM City.

Curriculum design

The Faculty Scientific committee is appointed by the Faculty and it is in charge of designing the academic curriculum. The role of this committee and other related organs has been reported in the previous part of this report. The Faculty's curriculum structure is strongly affected by the needs and demands of labour market. Many students have taken part in practice courses or conducted thesis closely related to business companies.

The labour market also influences the curriculum design and the opening of new in-service/part-time training courses, which are organised in collaborating with provinces or Power companies, ... As for these courses, the local training centers play an active role bridging the Faculty and labour market within the southern provinces of Vietnam.

The training contents are designed in connection with the national traditional education. The academic administration are upgraded and the credit points system is made more appropriate to the situation. The support of foreign university can help the Faculty partly solve problems of lacking lecturers, finance and other specialised activities.

In the current tendence of international integration, the Faculty is constructing some curriculum and programmes which can meet the standards set by the regional universities: Vietnam-France engineering programme, Twinning programme with Uni of Western Australia, advance honour classes, Nagaoka Twinning programme,... In parallel, the Faculty has other students exchange programmes with France, collaborating programmes with Asean countries supported by JICA. These programmes are recognized by related partners.

Monitoring progress and results of students

Students' learning results are summarized and informed regularly to students by means of mark reports or on the Faculty's website. The teachers in charge help students to evaluate learning results, to check learning progress, and to give counsel when necessary. The Academic office also provides students' data and general evaluation to the Faculty, from which, the Faculty will have corrective adjustments or counsels for students.

Regular evaluation of the curriculum

With the above evaluation system, the curriculum is regularly reviewed and adjusted every one year (for evaluation activities) and every five years (for the whole academic curriculum)

3.4.4. Quality assurance in student assessment

Criteria:

At present, the Faculty's curriculum helps assess students using consistent standards set by the University. Students are assessed by criteria announced publicly and implemented consistently.

Explanation:

Students' general learning results are reflected by summative marks including semester marks and collective marks. These results are regularly up-to-dated in students' reports (by papers or on the website of Academic office). Students' learning results are assessed by mid-term and final tests, practice tests, presentations, group discussions, reports, minor thesis or dissertations ... all of which are regulated in the course outline beforehand announced. The course outline identifies the course contents, objectives and course evaluation procedures. All of the evaluating criteria assure the validity, reliability and fairness to all students. The evaluation procedures are also developed and piloted to bring benefits to students.

Student assessment procedures are undertaken by teachers in charge, based on the progression of students towards the achievement of the knowledge and skills associated with their intended qualification. All assessment regulations also take into account the students' class attendance, illness and other mitigating circumstances. The procedures of enquiring and checking students' learning results are simple and easy for students to follow. The Academic office, the Faculty, departments, and lecturers themselves are always alert in quality assurance in student assessment.

By the students' studying results, groups of specialists will consider and make necessary adjustments in evaluation process. At the moment, the results of the evaluation reflect accurately students' learning ability and give trust in students and other related stakeholders.

However, with some particular subjects, evaluation procedures can be flexibly adjusted and announced publicly to students at the beginning of each school year. These procedures are reviewed every five years to ensure the reliability and validity of assessment activities.

3.4.5 Staff quality assurance

Criteria:

The Faculty has many policies to ensure the quality and capability of staffs and lecturers who are working and teaching at the Faculty.

Explanation:

For most of students, lecturers are the major learning source; therefore, the lecturers must be high-qualified and competent in teaching experience. Hence, the Faculty conducts the recruiting procedure annually. The general policy is to recruit a priori Masters and PhDs candidates from many sources. After recruitment, The Faculty assigns senior lecturers to supervise new recruits (preparation for lectures, teaching demonstrations, experiment instructions, and research practice ...).The Faculty develops plans to highly qualify young lecturers annually.

For newly graduate recruits, the Faculty requires them to have 2-year experience as teaching assistants and a certificate of higher education teaching before being qualified as lecturers at the Faculty. The Union of the Faculty and University also organize annual meetings and competitions to select the best lecturers in teaching and researching. Some lecturers have been selected to be senior lecturers or be associate professors.

The Faculty also encourages cooperation and scholar exchange programmes to other schools. In 2004, the Faculty appointed 05 lecturers to go abroad to conduct research (ENSISA (Haute-Alsace University) - France, Ulsan University - Korea, San José University – the USA, Chulalongkorn University - Thailand,...). The Faculty has appointed 08 young lecturers to follow Ph.D. studies in foreign universities using different sources of scholarships. In 2005, the Faculty sent 09 lecturers to go abroad for their study (Hosei University, Lausanne University - Switzerland, Nagaoka University - Japan, AUN-SeedNet Conference - Thailand, Scientific conference in Malaysia,..). The Faculty has also organized seminars given by many foreign professors (2 American professors, 3 Australian professors, 3 Japanese and Korean professors). In 2006, the Faculty sent 8 lecturers abroad for business and exchange programmes with Illinois University (the USA), Hosei University (Japan), Saint-Cyr University (France) and many other young lecturers to study Ph.D. programmes in foreign countries. The Faculty has also received and welcomed many foreign professors and experts to assure technical seminars in the Faculty.

3.4.6 Teaching facilities quality assurance

Criteria:

Due to the facility requirement of technical training programme, the Faculty always pays great attention to the learning and teaching facilities, especially to the system of laboratories. These facilities are purchased and upgraded to meet the demands of students and changing technologies.

Explanation:

The teaching facilities include a system of lecture rooms, libraries, laboratories and other teaching materials and services.

The system of lecture rooms is in a wide and ventilated area. All classrooms are equipped with sound amplifiers, lights, fans, slide overhead projectors. Some modern classrooms have modern facilities such as computers, projectors and air-conditioners. The Faculty is trying to invest more and more budget on installing facilities in classrooms and the internet bases (wire or wireless web) in the Faculty as well. The Faculty also has several special seminar rooms with complete modern equipments served for academic conferences or seminars. There are 3 projectors and 4 laptops dedicated to serve teaching activities. However, due to the high frequency of use, these facilities are not actually quite reliable.

The Faculty has not constructed its own library. Most of reference books are from Departments' bookcases. At present, the Faculty is using the IEL library of Vietnam National University-HCM City. Students and lecturers can access this electronic library from computer room within the Faculty or from the desktops at lecturers' rooms. The intention to establish a Faculty's library meets many problems related to location, finance, and other administrative tasks.

The Faculty has currently 3 central workshop labs: 01 lab for Power practice, 01 lab for Electronics practice, and 01 computer room. There are other 07 Departments' laboratories: 01 lab for circuit and measurement, 01 lab for Telecommunication, 01 lab for Electronics, 01 lab for Automation, 01 lab for Power system, 01 lab for Electrical techniques, and 01 lab for Industry Power. All the laboratories at the Faculty can meet the requirements of practising and experimenting. There are separate regulations applied in each laboratory and these regulations are instructed to students at the beginning of the course. There is obligatorily 01 fire-tool in each laboratory. The facilities in each laboratory include materials for instruction, marquettes for practice, measurement tools, report forms. The annual finance provided for the laboratories must satisfy the necessary requirements.

In some laboratories, students can use softwares and other modern facilities to serve their study. However, in order to improve and upgrade the training and research activities, these laboratories should be continuously invested and equipped with modern facilities.

At present, the Faculty has provided to staffs and students adequate computers. There is at least one computer connecting to the Internet at each department and laboratory. The Internet and intranet are managed by WAN office. In each department, there is one young technician in charge of administrating and posting informations on department's website. The Faculty's Internet is currently working with high stability. However, due to the needs of developing new softwares, and the downgrading situation of computers and facilities, the requirement to improve and purchase new computers is very urgent.

Some laboratories received supporting donations from foreign universities and organizations such as the laboratory for micro-circuit supported by Hosei university, electrical laboratory supported by Schneider coporation, experimental Module of Telecommunication and Power supported by PFIEV programme, and other facilities supported by national organizations. At present, the Faculty is planning to construct Telecommunication laboratory with the total state budget of 500,000USD. By the collaborating programme to train experts for Power companies, the Faculty also signed contracts to receive 01 billion VND for facilities within 5 years. In the coming years, the

microelectronics and power electronics.

In addition, the Faculty has lecturer-rooms, rooms for departments, and students association. At these places, many staffs and lecturers work and conduct research every day. Most of these rooms are equipped with computers. However, the need for larger place to ensure the teaching and learning activities is still actual. Therefore, in next future, the Faculty will focus on improving and upgrading the teaching and learning facilities.

3.4.7 Quality assurance in students assistance service

The Faculty has experienced the following procedures in order to assure quality in serving students:

- **The system of teaching assistants:** Young lecturers will be supervised by senior lecturers (Course committee and Department committee). These young lecturers will, beside designing their own lecture plans and experiment plans, assist senior lecturers in teaching activities.
- **The system of student counseling:** The teaching and learning office, the Faculty's secretary, students' assistant office, academic counselors, supervising teachers and youth union will be in charge of student counseling. The teaching and learning office is under the control and management of Vice-dean. This office is in charge of checking and saving data of students' study results provided by the Academic office. Students' assistant office is in charge of helping students solve problems of learning and research activities. The system of supervising teachers/academic counselors is a bridge between students and the Faculty. This system works under periodic meetings for counsel and advice. The Youth union will contribute their opinions to the Faculty at weekly meetings.
- **The accommodation for students:** Because of the high number of students, the Faculty has not been able to solve all problems for students' accommodation. However, the Faculty's group of social activities have assisted most of the students regarding accommodation problems. In addition, the informations relating the students' accommodation are posted on the Faculty's website www.deeforum.net.
- **The conditions of sport activities:** The Faculty's youth union has established many sportive clubs of students (football, basketball, volleyball ...). These clubs are supported by contributive finance for operation and are organized with regular activities. Annually, the Faculty organizes one sport tournament of all activities for all students.

The Faculty may be proud of two effective tools to assist students: The students Forum of Electrical Department and the Faculty's group of social activities.

3.4.8 Self-assessment

The Faculty regularly organizes periodic assessment activities for courses and curriculum as the followings:

- ***The training curriculum:*** the curriculum is regularly revised and upgraded to tune the changing technology and society. In general, the curriculum is designed following the core programme issued by MOET.

The curriculum is periodically reviewed, and adjusted on the basis of collecting opinions from employers, graduates, academic organizations and international standards.

- ***Training course evaluation:*** this activity is regularly conducted by course lecturers. The course contents are up-to-date and practical. The role of students is the center of the effective evaluation.

At the course level, all contributive opinions of lecturers, students, graduates, and all reflective informations from industries are always considered by the Faculty. Basing on these opinions, the Faculty will have corrective methods to improve and upgrade the effectiveness of teaching and learning activities or have suggestions presented to the University.

In recent years, the course and curriculum evaluation is the focus of the University and Vietnam National University-HCM City.

Besides, the self-assessment at the Faculty and Faculty's Union is regularly conducted. After each periodic meeting, there are always reports summarizing past activities and envisaging future plans for each course, department and evaluation process.

3.4.9 *Internal auditing*

As for internal auditing, the Faculty currently does not have professional auditing staff. Therefore, the auditing activities in the Faculty are not conducted appropriately and thoroughly. This is one of the difficulties which the Faculty as well as other Departments of the University have to face.

However, the self-assessment has been conducted regularly to review all activities of the Faculty. Most of the problems and difficulties related to the teaching and learning activities have been solved effectively and appropriately.

3.4.10 *The system of data administration*

In recent years, the system of data administration at the Faculty includes:

- ***Pass rate of students:*** 62.38 % (full time students, the average number of 5 years: 2000-2005), 37.62% (part time students, the average number of 5 years: 2000-2005).
- ***The frequency of employment of the graduates:*** 53.4% of the graduates have jobs after graduation (2005). The data from 2000 to 2001: 352/386 students have jobs closely related to the training courses (account for 91.19%).
- ***Students' satisfaction towards the training curriculum:*** this satisfaction is reflected on the ratio of students who have jobs and the achievements of alumni. During recent years, there have been no negative opinions of students and other people towards the training curriculum.

- **Teaching staff:**

	2001	2002	2003	2004	2005
Total number of lecturers	117	125	119	115	117
Associate professors	01	02	03	03	03
Ph.D.s	20	21	19	22	22
(%)	17.1%	16.8%	16%	19.1%	18.8%
Female	17	19	14	15	15
(%)	14.52%	15.2%	11.7%	13.04%	12.8%
Full time lecturers	81	80	89	76	81

Collaboration and exchange programmes with foreign universities

In 2004, the Faculty appointed 05 lecturers to go abroad to conduct research (ENSISA (Haute-Alsace University) - France, Ulsan University - Korea, San José University – the USA, Chulalongkorn University - Thailand,...). The Faculty has appointed 08 young lecturers to follow Ph.D. studies in foreign universities using different sources of scholarships. In 2005, the Faculty sent 09 lecturers to go abroad for their study (Hosei University, Lausanne University - Switzerland, Nagaoka University - Japan, AUN-SeedNet Conference - Thailand, Scientific conference in Malaysia,..). The Faculty has also organized seminars given by many foreign professors (2 American professors, 3 Australian professors, 3 Japanese and Korean professors). In 2006, the Faculty sent 8 lecturers abroad for business and exchange programmes with Illinois University (the USA), Hosei University (Japan), Saint-Cyr University (France) and many other young lecturers to study Ph.D. programmes in foreign countries. The Faculty has also received and welcomed many foreign professors and experts to assure technical seminars in the Faculty.

- ***The effectiveness of staff training is reflected as follows:***

The number of lecturers who participate in research activities (in 2004-2006):

- The number of lecturers who own 01 research report: 70
- The number of lecturers who own 02 research reports: 50
- The number of lecturers who own 03 research reports: 30
- The number of lecturers who own 04 research reports: 10
- The number of lecturers who own more than 05 research reports: 4

The number of lecturers who participate in compiling and writing books/textbooks/teaching materials (in 2004-2006):

The data is from 2000 to June/2005

- The number of lecturers who participate in writing 01 teaching material: 15
- The number of lecturers who participate in writing 02 teaching materials: 10
- The number of lecturers who participate in writing 03 teaching materials: 4
- The number of lecturers who participate in writing 04 teaching materials: 2

The consent of students towards lecturers: there have been any data related to the consent levels of students towards lecturers. However, in general, there have been few negative opinions from students. Most of the classrooms are rather crowded.

Staff/student-ratio and staff/graduate-ratio (mentioned for only full time and part time courses)

	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005
staff/graduate-ratio	117/958 (1:8.18)	117/1183 (1:10.11)	125/1171 (1:9.368)	119/728 (1:6.117)	115/852 (1:7.40)
Staff/student-ratio	118/3012 (1:25.5) the average number of staff divided by the overall number of students in the last three years.				

- **Students information:** Due to the high entrance marks of the Faculty (Academic year 2006 – 21marks, 2005 –25marks, 2004 -22.5marks- data of the Administration office), most of the Faculty’s students are good pupils from high schools in the South Vietnam.
- **The Faculty’s learning resources:** Computer rooms, laboratories, libraries ...
- **The Faculty’s facilities:**
 - Providing adequate informatic equipment to support teaching and learning activities, research and administration.
 - Constructing classes with standard space and facilities.
 - Planning to develop facilities to support teaching and learning and other activities.

The Faculty pays great attention to the above system of data and plans developing strategies to tune the changing and modernizing tendency nationally and internationally.

3.4.11 Information announcement

In order to fulfill the required tasks and objectives, all the informations regarding the activities: academic schedule, establishing foreign relations, staff clubs, unions, ... are posted on the Faculty’s website (www.dee.hcmut.edu.vn); otherwise, the informations about students’ activities are also presented on the website (www.deeforum.net), which is dedicated to Faculty’s students. Particularly, the informations related to teaching and assessing procedures, learning opportunities, alumni’s opinions, ... are usually upgraded and developed.

The source and reference of the above information are provided in order to ensure the accuracy and objectivity of the materials.

3.4.12 Handbook of quality assurance

At present, the Faculty does not have an official handbook of quality assurance. However, there are many papers related to the Faculty’s activities as follows:

- Papers related to procedures and training curriculum.
- Papers related to students’ activities.
- Papers related to administrative activities.

AUN-QA Common criteria and indicators

AUN-QA Common criteria	Indicators	Value (1-7)
Criteria 1: Existence of QA System		
Level 1: Existence of documentation and continuously evaluated QA system.	Goals and aims of internal QA are explicit.	
	Monitoring system works in good order.	
	Core activities are periodically reviewed.	
	The quality of students assessment is ensured.	
	The quality of staff and lecturers is good.	
	Learning facilities are adequate.	
	The quality of students assistance service is good.	
	Core activities are regularly evaluated.	
	Internal audit is regularly conducted if there is no external evaluation.	3
	Information system is adequate.	
The Faculty's QA Handbook is printed and published.		
Level 2: The QA system be subjected to external audit	The goals and aims of internal QA are explicit.	6
	Monitoring system works in good order.	6
	Core activities are periodically reviewed.	6
	QA in students assessment.	6
	QA in staff and lecturer evaluation.	5
	QA in learning facilities.	4
	QA in students assistance service.	3
	Self-assessment is conducted.	3
	Audit system/participation of external evaluation.	
	Information system.	4
	QA Handbook.	3

Chapter 4: Output

Table 5: The total number of graduates during 2000-2005 and the ratio of students

Academic year	The total number of graduates (account for all courses)	The number of graduates in each course		The ratio of graduates in each course	
		Full time	Part time	Full time	Part time
(1)	(2)	(3)	(4)	(5)	(6)
2000-2001	958	608	350	63.46	36.53
2001-2002	1183	628	555	53.08	46.91
2002-2003	1171	754	417	64.38	35.61
2003-2004	728	469	259	64.42	35.57
2004-2005	852	567	285	66.54	33.46

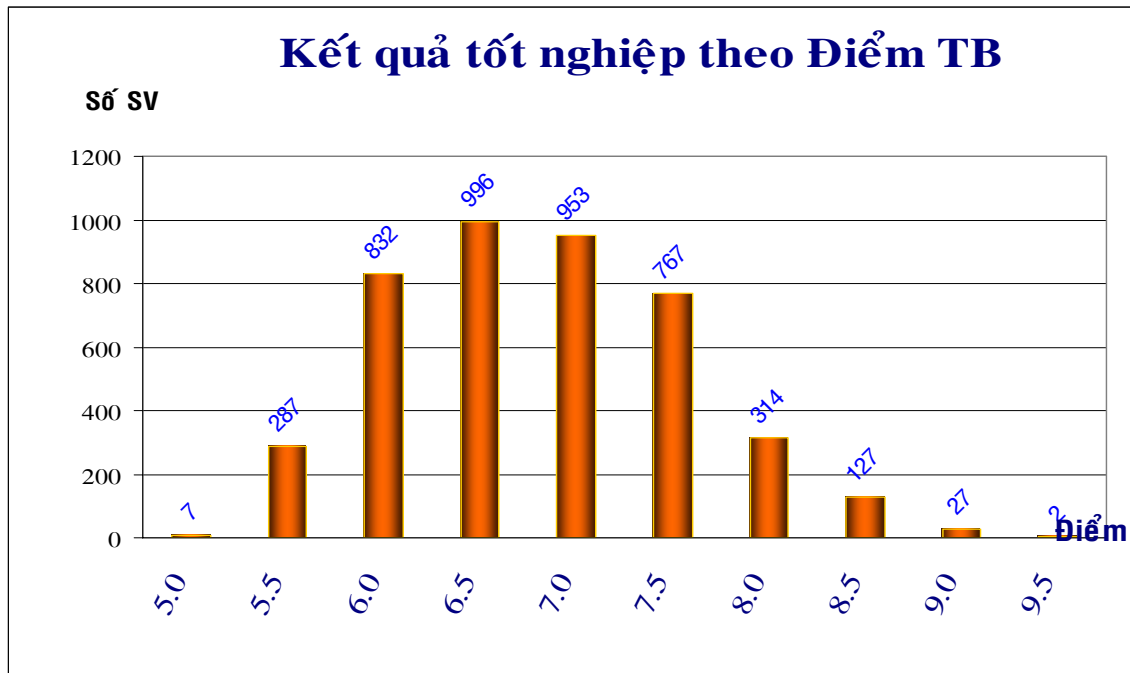


Figure 1: The statistics of study results from 4312 graduates of the Faculty (in many recent years)

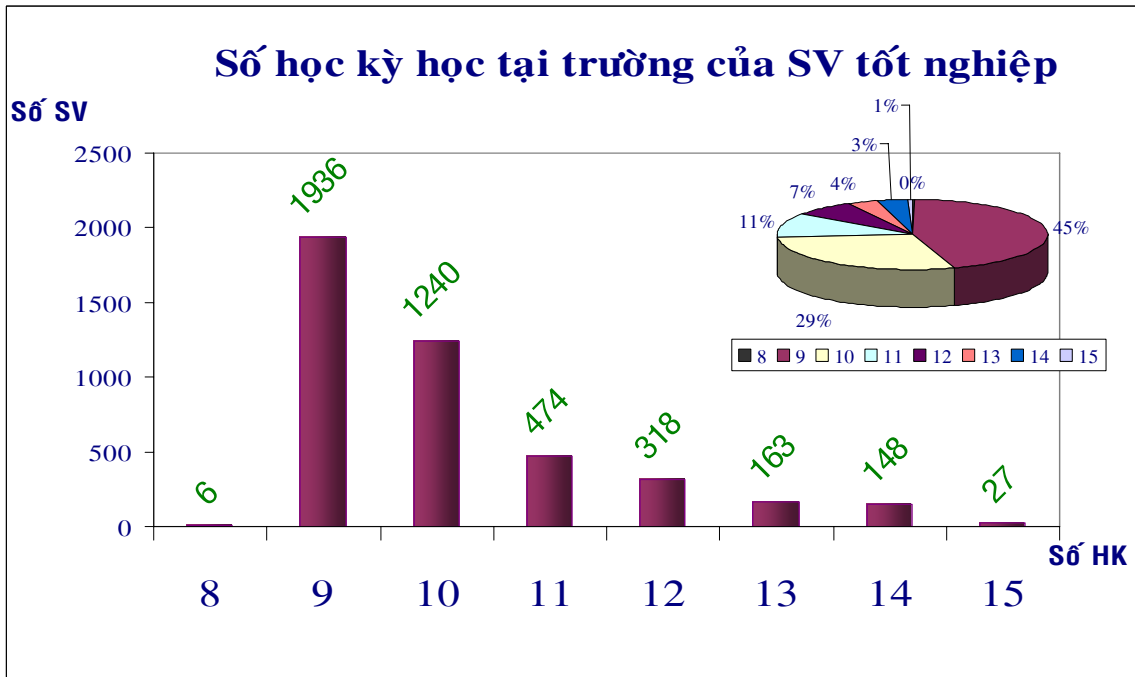


Figure 2: The statistics of graduation progress

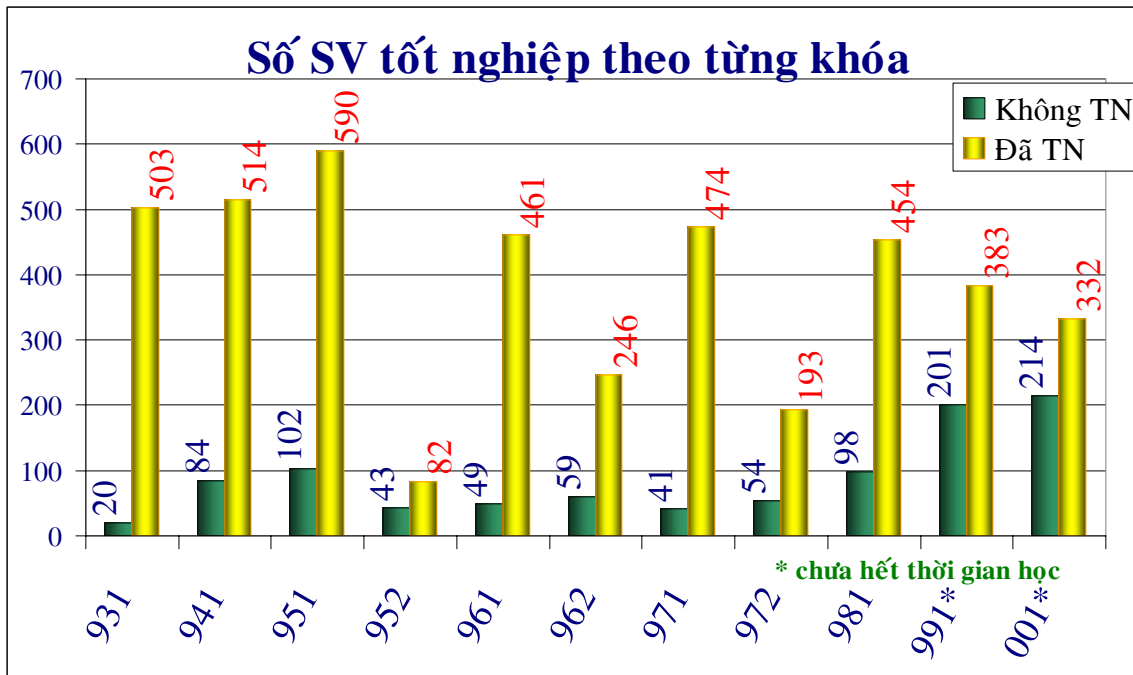


Figure 3: Pass rate and dropout rate – Academic years: 1993-2000

Table 6: Average duration of Masters' graduation at the Faculty

Academic year	The input number	Duration of graduation					Dropouts	The output number
		2 years	2.5 years	3 years	3.5 years	4 years		
96-97	27	0	0	7	10	5	5	22
97-98	25	0	0	14	5	1	5	20
98-99	51	0	8	21	1	10	11	40
99-00	62	3	21	17	5	6	10	52
00-01	80	7	38	15	6	1	13	67
01-02	95	43	29	7			16	79
03-04	121							
04-05	118							
05-06	104							

Table 7: Average duration of Ph.D.s' graduation at the Faculty

Academic year	The input number	The number of actual Ph.D. students	The number of successful Ph.D. theses	Dropouts
98-99	00	03	01	01
99-00	01	02	01	-
00-01	05	06	-	01
01-02	02	07	-	-1
02-03	02	08	-	-
03-04	02	08	-	01
04-05	07	14	01	-
05-06	03	16	02	01

The employment of graduates

Annually, the Faculty has two graduation periods, the first one is in April and the second one is in November. The Faculty has **data of students' employment collected when students come back to the Faculty to get degrees (2 months after graduation)**. According to the statistics provided by the Academic office, in the first graduation period of the academic year 2005, there were about 53.4% graduates having jobs immediately after their graduation. Among these graduates, 60-70% has jobs closely related to their majors, the rest have changed their jobs or continue their higher education. After 01 year, the number of graduates having jobs strongly increases (reports in annual meetings of alumni). Most of the Faculty's graduates have stable jobs after 1 or 2 years.

According to the statistics provided by VNU-HCM's project "A survey of graduates in 1999 at VNU-HCM" and the Report of April, 2000, the University of Technology was mentioned and reported. Within 1 year after graduation, above **70% of the graduates have jobs closely related to their majors**. The data in academic year 2000 – 2000: 352/386 graduates have jobs closely related to their majors, accounted for **91.19%**).

Contact with graduates:

The Faculty uses the Students association as a bridge to contact with graduates to accumulate scholarships for current students. The Faculty's website is regularly upgraded to keep everybody informed of the Faculty's activities. In addition, the alumni organize annual class meetings (on teachers' day 20 of November). Thanks to these activities, the relationship between the Faculty and students becomes closer.

Chapter 5. Satisfaction of stakeholders

5.1 Opinion – Students and graduates:

The high percentages of graduates who easily get jobs and the achievements of the alumni create strong influence to successive generation of students. This can help explain why the entry competitive exam marks of the Faculty are always higher than that of other universities. During many recent years, there has been few negative opinions in terms of the Faculty's curriculum. Most contributive opinions at annual meetings between the Faculty and students focus on finding solutions to problems of course administration and modernisation.

In the inverse way, many graduates regularly contact and visit the Faculty and Departments, and this contributes to the close mutual relationship.

5.2 Opinion – Labour market:

The needs of Electrical and Electronics engineers are still very urgent up to this time. Employment advertisements are regularly sent to the Faculty and posted on newspapers. Nowadays, besides the Faculty, there are many other centers training Electrical and Electronics engineers in HCM City and in the South Vietnam so that the training concurrence becomes more and more intensive. The Faculty's lecturers have compiled and written about 100 textbooks and reference books serving for undergraduate and postgraduate courses. These books are used not only at the Faculty but also within many other universities in the South Vietnam as well. Many of the Faculty's lectures have been invited to be supervisors and reporters for national academic projects. The Faculty's staff also participate in technical documents translation service for many organizations such as Schneider coporation, VIT port, VietsoPetro coporation, Quang Trung software zone. Many foreign universities and companies are interested in supporting and recruiting the Faculty's students in their studies, employment and further education.

Chapter 6 : Strong/weak analysis

6.1. Summary of strong points

- The Faculty's curriculum provides background knowledges and skills (general and professional) to students. This curriculum is regularly upgraded and adjusted to meet the changing technology and society. The credit points system is appropriate and can develop students' studying ability.
- The lecturers are well-qualified, responsible and enthusiastic in their teaching activities.
- The intake students' academic level is good. This can help students to keep up with the Faculty's curriculum.
- All the regulations related to teaching and learning activities are rigidly followed.

- Many new training courses have been established and conducted.
- The teaching and learning facilities are regularly improved and upgraded.
- The administration and data analysis are conducted appropriately and consistently.

6.2 Summary of weak points

- The credit-based system was conducted as a trial system within several universities, therefore, the national agreement and consistence has not been totally attained. This situation has caused many problems in terms of constructing connection and conducting curriculum evaluation among universities.
- The curriculum needs much improvements (more practical and streamlined), while the core programme of MOET has not been officially issued. The curriculum contents are not appropriate to encourage students' independence and creation after their graduation (foreign language ability, group work, presentation, communication ...)
- The number of lecturers is still small and therefore cannot response to the demands of higher education requirements (the ratio of student/lecturer is small). The number of students is still high and therefore affects the teaching and learning quality (the ratio of lecturer/student is 1:35).
- The teaching and learning facilities are still inadequate (small and out-of-date laboratories, low-quality information network ...).
- The relationship with business companies and international organization is still limited (loose relationship with companies, and the exchange of lecturers and students with international organizations and universities is still of small number)

6.3 Quality plans for the coming years

- The credit points system needs to be improved and implemented consistently in the whole country.
- The curriculum needs improving and streamlining in a new direction (this curriculum may be different from the core programme of MOET)
- Lecturers of high qualification should be recruited and provided more opportunities. Young lecturers should be sent to study abroad. Foreign lecturers should be invited to come and teach at the Faculty.
- The number of undergraduates should be reduced and postgraduates increased.
- The Faculty should be active in searching for national and international projects to improve the teaching and researching facilities.
- The Faculty should count on the alumni to develop the collaboration with business companies.