Republic of the Philippines
OFFICE OF THE PRESIDENT
COMMISSION ON HIGHER EDUCATION

CHED MEMORANDUM ORDER
No. 25
Series of 2005

SUBJECT : REVISED POLICIES, STANDARDS AND GUIDELINES FOR ENGINEERING EDUCATION

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In accordance with the pertinent provisions of Republic Act (RA) No. 7722, otherwise known as the "Higher Education Act of 1994," upon the recommendation of the Technical Panel for Engineering, Technology and Architecture and by virtue of Resolution No. 207-2005 of the Commission en banc dated May 9, 2005, for the purpose of rationalizing Engineering Education in the country and making it responsive to the demands for professionals in the business and industrial world, the following policies, standards and guidelines for engineering are hereby adopted and promulgated by the Commission, thus:

INTRODUCTION

This set of Policies, Standards and Guidelines shall apply to all HEIs, both government and private offering engineering programs.

ARTICLE I – AUTHORIZATION

Section 1. Authority to Operate. Any engineering program or course shall be operational only upon an expressed provision of law, or with the proper authority issued pursuant to law by the Commission on Higher Education (CHED)

ARTICLE II – OBJECTIVES

Section 2. General Objectives. Every engineering program shall define its vision mission, goals and objectives along the following general objectives:

2.1 To produce graduates with the necessary theoretical knowledge of mathematics and natural sciences as well as the background knowledge needed by them to acquire the experience and practical skills required of professional engineers.

2.2 To educate students for their careers as engineers, to enable them to contribute to the developmental effort of the country as entrepreneurs or competent professionals

2.3 To educate students imbued with good moral and ethical values and the acute sense of awareness of the conservation of the environment for the sustainable development of the country.

2.4 To provide students instruction in both theoretical and practical aspects of engineering and exposure to industrial setting in the form of field experience

Section 3. Assessment of Achievement. Each engineering program shall provide evidence that objectives as provided herein is being fulfilled.

ARTICLE III – MINIMUM CRITERIA

Section 4. Instructional Program Quality

4.1 Faculty

College administration should encourage the development of the faculty to obtain their masters' and doctoral degrees in relevant fields so that the school will exceed the minimum requirements stated below for all engineering schools.

4.1.1 Full-Time and Part-Time Faculty Qualifications

1. Only faculty members meeting both governmental and institutional standards or requirements shall be hired for any teaching position.

2. At least 60% of the faculty force handling professional courses are on full-time basis

3. At any given time, at least 20% of the faculty members handling professional courses of the school/college of engineering shall be holders of masters' degree in their field of specialization or in engineering education, provided that half are full-time faculty. As an alternative, the holders of the master's degree may be set at 10% provided that the other 10% of the faculty have had at least ten (10) years experience in teaching professional engineering subjects or ten (10) years of field experience.

   Faculty members teaching professional courses shall be registered engineers and preferably with field experience.

4. At any given time, at least 40% of the faculty members teaching Mathematics, Physical Sciences and Basic Engineering shall be holders of baccalaureate degree and at least master's degree in either engineering, physics, chemistry, mathematics or computer science.

4.1.2 Assignment

The teaching assignment and responsibility of each faculty member shall be limited only within the area of his specific training and/or field experience.

1. Full-time Faculty :

   a. The semestral teaching load of a full-time faculty member shall be twenty-four (24) academic units per week. However, a faculty member with at least above average performance rating may be allowed an additional six (6) academic units beyond the allowed normal teaching load;

   b. A full-time faculty member shall devote time for community and other extension services

   c. A full-time faculty member shall conduct relevant research work

2. Part-time faculty:

   a. A part-time engineering faculty member shall have a maximum teaching load of twelve (12) academic units per week.

   b. Each part-time engineering faculty member shall have a schedule for student conference on campus.

4.1.3 Duties

1. It shall be the announced policy and practice of the school/college of engineering to require its faculty members to:

   a. follow written course syllabi for each course;

   b. use library and audio-visual resources in teaching;

   c. participate in scheduled departmental meetings;

   d. encourage participation in professional engineering society meetings, conferences and conventions;

   e. administer effective assessment measures to evaluate student achievement;

   f. follow the established grading system, which should have been explained, to the students at the beginning of each course;

   g. improve teaching efficiency using innovative methods; and

   h. participate in service training programs for faculty members.

4.1.4 Loading Profile

4.1.4.1 Preparation

The maximum number of academic preparation shall not be more than four (4) different courses

4.1.5 Teaching Performance

The evaluation result should show that majority of the faculty has, as a whole good or better performance.

4.1.5.1 Evaluation system

1. The administration of each school/college of engineering shall have a defined set of procedures for improving the classroom performance of its faculty members, which shall include students and supervisor's evaluation.

2. The dean or his designate shall observe and evaluate the teaching capabilities of the faculty members at least once during every school year.

   The evaluation shall include at least the following aspects:

   a. actual observation of the faculty member's performance in the classroom;

   b. written summary of observation, a copy of which shall be provided the faculty member; and

   c. the set of evaluation criteria distributed to each faculty member at the start of the semester which shall include: subject-matter competence; suitability of examinations, assignments and levels of presentations; the ability to identify and respond to student needs; punctuality and regularity of attendance and record keeping; faculty members personality/ grooming; rapport with students and other faculty members; classroom and delivery of instructions; organization and control; professional participation; availability to students; adherence to course syllabi; student-faculty course evaluations; written evaluation reviewed by the faculty member with the opportunity to file a response; and the right to appeal by the faculty member.

4.1.6 Hiring Policies.

The school/college of engineering shall have an established procedure for recruitment of new faculty members. The recruitment process shall involve the president or his authorized representative, the dean(s) and department heads.

4.1.6.1 Faculty Development Plans/Activities

A faculty development plan shall be developed and implemented by the institution. There shall be sufficient funds allotted to support the faculty members in pursuing graduate studies and professional trainings or seminars. An assessment mechanism shall be developed to evaluate the faculty development plan on a regular basis.

1. Faculty Development

a. Programs

(i) Each administrator and full-time engineering faculty member shall be encouraged to participate in a school-approved program of professional development.

(ii) Every full-time engineering faculty member shall be encouraged to attend professional meetings, workshops and conferences.

(iii) Each full-time engineering faculty member is required to prepare a five (5) year career path development program.

b. Leave of Absence.

There shall be a set of policy and procedures permitting every full-time engineering faculty member a leave of absence for professional development with or without pay at the discretion of the administration, and provision to ensure that the faculty member shall be allowed to return to his/her regular position at the end of the leave period. Such policy shall be published or defined in the school rules and regulations.

c. Financial Assistance.

There shall be a program in the school / college of engineering which shall provide financial support to full-time engineering faculty members to pursue advanced degrees or undertake graduate study and continuing education programs.

d. Contractual Terms

A full-time faculty member granted either a paid or unpaid leave of absence or provided assistance by the school in pursuit of graduate studies shall be governed by contracts by and between the school and the faculty member concerned.

e. Substitutes

Each school/college of engineering shall have a system of providing suitable substitutes for faculty members who cannot attend their regular teaching assignments.

4.2 Laboratories

4.2.1 Main Laboratories

4.2.1.1 Specification/Ventilation/Lighting Acoustics

1. Capacity -The laboratories should provide an area of at least two (2) square meters per student.

2. Acoustics -The sound levels inside the laboratory facility shall generally conform to the standard building practices; the maximum sound level is eighty (80) db.

3. Ventilation -Laboratories shall have adequate ventilation.

4. Lighting-Illumination levels inside the school shall be adequate and should conform to the existing code.

5. Other Requirements - Essential services needed by laboratory rooms such as water and gas outlets shall be present when required. Students working in laboratories where obnoxious gases are generated must be made to wear fume mask.

4.2.1.2 Compliance with Minimum Standards

The laboratory room shall comply with all government standards for laboratory rooms, with the following addition:

1. Equipment Requirement - There shall be sufficient functional equipment, apparatus, supplies, tools and other materials inside the engineering laboratories, in order to achieve the following objectives:

   a. To allow every student to perform all the basic laboratory exercises called for in each laboratory course, as provided in the approved curricula of the engineering degree offered by the school.

   b. To maintain a situation wherein no laboratory student work group shall exceed five (5) students working on the same laboratory equipment at the same time.

2. Modernization of Equipment -Each school/college of engineering shall have a program for the continuing modernization and upgrading of its instructional laboratories, facilities and

equipment. The said program shall have an adequate annual allocation in accordance with the financial capability of the school.

4.2.1.3 Personnel/Maintenance/Safety

1. Faculty Requirement

   a. Engineering laboratory subjects shall be taught preferably by a full-time faculty member.

   b. Student-faculty ratio in the individual laboratory section shall not exceed 40:1 provided, however, that in the computation of this ratio, all laboratory technicians and assistants present in the laboratory in which each section is in session and who are assigned supervisory responsibilities over the students may be counted as "faculty" for purposes of this section.

2. Technician Requirements

   There shall be one (1) full-time laboratory technician or assistant for maintenance and distribution of apparatus and equipment per laboratory in chemistry, physics, mechanical power and hydraulics, chemical processes, surveying, soil and materials testing, machine shop, electrical power and electronics.

   "Full-time" for laboratory technicians means at least six (6) hours of work for any individual laboratory, plus such other additional hours, if needed, during the actual laboratory exercises.

3. Maintenance of Equipment

   a. Each school/college of engineering shall have a program for the regular preventive maintenance, repair and calibration of laboratory equipment.

   b. The said program shall have an adequate annual allocation of funds to be determined by the school concerned.

   c. The school/college of engineering shall maintain a systematic record of repairs and expenditures incurred.

   d. The school/college of engineering shall make available additional funds necessary for emergency repairs of essential laboratory equipment to ensure the continuing operation of the instructional program of the laboratories.

4. Calibration of Equipment

a. Each school/college of engineering shall ensure that the measuring instruments in its laboratories are recalibrated regularly. The date of last calibration of a measuring instrument shall be indicated on each instrument.

b. The laboratory reference standards, if maintained by the school/college shall be kept separately from other laboratory instruments and kept in a suitably controlled environment.

c. The school/college of engineering shall ensure that all measuring instruments, especially universal testing machines and other testing machines and electrical instruments, if used for the purpose of providing a commercial service, such as testing concrete samples for contractors, shall be recalibrated to standard specifications at least once every calendar year.

d. In addition to other requirements, no such commercial services shall be provided unless the institution can provide information to the person or firm requesting the service, the date on which the instrument used was last calibrated and the estimated margin of error of the measurement made with it.

5. Inventory of Equipment

Each school/college of engineering shall maintain inventories of laboratory equipment, which shall be updated annually. The inventory shall contain the following information:

a. name of the item;

b. quantity on hand;

c. operational status (operational, not operational, under repair, unrepairable);

d. year of purchase, if known; and

e. original purchase price, if known.

6. Laboratory Safety

Each school/college of engineering shall have a program of laboratory safety, which shall include the following components and/or requirements:

a. Annual training program in laboratory safety shall be provided for both the students and staff using or working in the laboratories and shops.

b. Secured, well-ventilated, separate storage for gas cylinders, radioactive materials, chemicals and flammables shall be provided. All materials shall be in closed container, labeled as hazardous and shall be properly shelved with restraining bars.

c. Shelves shall be provided for the proper storage of chemicals and proper places (not adjacent to stairways) for flammable materials shall also be provided.

d. Fire extinguishers with proper specifications required by Fire Code and are commercially inspected and recharged shall be provided.

e. Annual training/orientation on fire and earthquake evacuation procedures including evacuation drills for students and staff shall be provided.

f. Specific warning signs shall be posted in laboratories where chemical, electrical or radiation experiments are performed or where machinery with moving parts is used. Gas, steam, air and vacuum lines must be color-coded.

g. Adequate ventilation for the removal of dust and chemical fumes in all laboratories and shops shall be provided.

h. Laboratory aprons/gowns shall be furnished and worn by students where appropriate.

i. Eye protection shall be furnished to every person and shall be worn where grinding, milling, drilling, welding or boiling is taking place.

j. Safety rules, regulations and evacuation procedure shall be posted in conspicuous places.

k. Emergency shower and eyewash shall be provided in laboratories where there is possible exposure to chemicals.

l. Disposal of hazardous waste shall be provided.

7. Storage

There shall be an adequate and appropriately ventilated storage room in the school/college of engineering to store or shelve all equipment, apparatus and supplies not in use.

8. Laboratory References

Laboratory manuals, catalogues and other references, shall be made available for use/loan to, or purchase by all students in all engineering laboratory courses. The laboratory manuals shall

include instructions for each experiment in the courses covered. Appropriate safety warnings must be stated clearly as part of the experimental procedures, which may be hazardous. The manual shall include procedures and equipment lists that match the actual equipment in the institution's laboratories in which the courses are conducted.

4.2.2 Computer Laboratory

All engineering schools shall comply with the facilities/equipment specified in the Curricular Guidelines.

4.2.2.1 Utilization/Software/License

The school shall provide adequate computer hardware and license software to respond to the objectives of the subject/course specified in the curriculum and to maximize the utilization of the equipment.

4.2.2.2 Personnel

There shall be one (1) full-time technician assigned to the computer laboratory.

4.2.2.3 Computer/Student Ratio

The computer-student ratio in a computer laboratory class shall be 1:1.

4.2.2.4 Connectivity and Networking

The computer laboratory shall be at least multi-user or a networked system. Internet access shall be made available to all students and faculty and in such other places like the library.

4.3 Library

A separate engineering library should be provided with an office for the librarians and staff, a control desk for checking out materials, shelf-space for all processed materials, a display space for bulletins, a storage for all processed materials, a display space for bulletins, a storage for library supplies, an appropriate typewriter, at least one large English unabridged dictionary and stand, at least one English science and technology dictionary and stand, and at least one telephone if available in the locality.

Status

In a multi-program school setting, the engineering library may be set-up and maintained as a part but separate and distinct unit or section within the institutions' main library, provided, however, that the

engineering library shall be located within 200m (655 ft.) from each of the following:

(1) the engineering laboratories;
(2) the majority of the engineering classrooms; and;
(3) the engineering faculty room.

Capacity

The engineering library shall provide suitable chairs with back supports and tables or other flat writing surfaces, which can seat 5% of the maximum school attendance of the engineering students at any one time with at least 0.64sq. m. space of floor area per reader.

Design

The furniture and facilities of the engineering library shall be arranged to promote easy use and flow of traffic and all materials shall be arranged for quick and easy access by students.

There shall be a walk space of no less than 0.60 m. (24 in.) behind each occupied chair in the engineering library.

4.3.1 Book Collection/Periodicals

4.3.1.1 Funding

The funding of the engineering library development program stated herein shall allow the gradual attainment of these goals through the use of the engineering library fees collected. Library fees exclusive of salaries of library personnel shall be allocated for the purpose indicated.

4.3.1.2 Book Collection, Library Fee and its Use

The engineering library fee shall be spent exclusively for the purpose indicated herein. However, if the finance of the school warrants, an additional amount shall be allotted for its library development program. The engineering library shall:

1. have at least two (2) technical non-duplicate books with copyrights of less than ten (10) years old per technical subject;

2. have at least two (2) professional engineering non-duplicate books with copyrights of less than ten (10) years old for each course of the last three (3) years of each engineering curriculum in which a degree is offered;

3. have copyrights of at least 50% of the professional engineering and another 50% of the other technical non-duplicate books shall not be more than 15 years old;

4. have engineering and other technical handbooks; and

5. have a program of accessioning additional non-duplicate technical books at a rate of at least 0.1 books per full-time equivalent engineering student per year.

4.3.1.3 Periodical Collection

The library of each school/college of engineering shall have a program for the acquisition and maintenance of at least two (2) periodical subscriptions to specialized/research engineering journals and one (1) general interest technical periodical subscription for each curricular area in engineering for which a degree is offered.

4.3.2 Technical Services/Access

4.3.2.1 Accessibility

1. Control- An effective control system for users of library materials shall be established and maintained by the library staff. This control system, however, shall not restrict students' access to the library resources.

2. Card Catalogue- a card catalogue of engineering library resources shall be maintained with author, title and subject cards. Each title heading shall be updated annually along with both a current shelf list and accession records.

3. Periodicals- Current periodicals subscriptions, along with an index of periodical available, shall be on display and readily accessible to students for browsing.

4. Physical- The library control system shall include the following provisions:

   a. No more than 20% of the engineering library book collection should be on reserve at any one time.

   b. No more than 40% of the engineering library book collection shall be caged, or behind locked doors or closed counters or otherwise inaccessible to student for browsing.

   c. At least 60% of the engineering library book collection shall be freely accessible to students for browsing, and the remainder available on call.

   d. To eliminate pilferage from the library, the books or materials that the student should carry to or from the library should be monitored.

4.3.2.2 Loan System

Books not on reserve shall be allowed to be checked out by the students from the engineering library for at least one (1) class day with the opportunity for renewal following the said period.

4.3.2.3 Inter-Library Cooperation

Cooperative relations, including inter-library loan services and inter-library accessibility of resources with other libraries, shall be established and maintained to augment and enhance the engineering library services.

The cooperative relations, with respect to subscriptions to special use or specialized technical journals, shall include jointly planned purchases and the sharing of periodical resources among engineering libraries within a given locality, if feasible.

4.3.2.4 Library Hours

The engineering library shall be open during the regular school days. In no case shall it be less than 12 hours per regular school days.

4.3.2.5 Orientation of Students

There shall be a functional library orientation program for all new students at the start of each semester.

4.3.2.6 Announcements

The library shall have a system of announcing all new acquisitions at least once every two months to all engineering faculty and students.

4.3.2.7 Preservation of Resources

The library shall take measures for the preservation of periodicals and the refurbishing of books including moisture control, binding of periodicals, rebinding of worn books, pest control, proper shelving and storage, anti-theft practices, and availability of photo copy services to reduce damages resulting from lost or torn pages.

4.3.2.8 Storage

A readily accessible dead book storage, not taking up study space, shall be provided for seldom used books.

At least five (5) cubic m. (176 cubic ft.) per 1000 books shall be provided for storage space in the library.

4.3.2.9 Safety

There shall be one (1) fire extinguisher per 200 square m. (2150 square ft.) of library floor space or fraction thereof.

4.3.3 Record of Use/ Orientation/ Other Services/ Personnel/ Environment

There shall be a system for the use of library resources / materials and available access to Internet.

4.3.4 Personnel

The engineering library, if physically separate from the main library and has a reading capacity of more than fifty (50), shall have one (1) engineering head librarian with a degree in library science and adequate number of assistant librarians who have had training in library work.

The librarians shall participate in engineering faculty meetings and shall serve on engineering faculty planning committees dealing with educational programs.

The librarians shall be encouraged to join professional societies of librarians.

The head shall be a registered librarian.

4.4 Instructional Facilities

4.4.1 Classrooms

4.4.1.1 Capacity

The classroom facility of the school/college shall have a capacity of one (1) sq. meter of floor space per student. The classroom standard shall apply to instructional portions of laboratories and the laboratory standard shall apply to experimental areas only (exclusive of space occupied by equipment, laboratory benches and classroom areas in the laboratories). Standard classroom shall be at least 7m x 9m in size in conformity with the National Building Code.

4.4.1.2 Non-Laboratory Instructional Space

1. The school/college of engineering shall provide a variety of spaces, in addition to laboratory spaces, which can accommodate tutorial sessions.

2. A quiet and comfortable room for individualized instruction and counseling of students shall be provided.

3. The instructional spaces need not be marked for specific purposes.

4.4.1.3 Design

All instructional spaces for lecture, recitation, demonstration or tutorial purposes shall be provided with at least one fixed lecture board, one functioning dual electric outlet, comfortable seat for the students and a bulletin board for posting of bulletins and announcements.

4.4.2 Environment

4.4.2.1 Acoustics

The sound levels inside the school facility should generally conform to standard building practices, as follows:

Maximum Sound Level in decibel (dB)	Use
50	Classrooms
80	Laboratories
56	Offices
42	Library

4.4.2.2 Ventilation

The classrooms, libraries, laboratories, and offices must have adequate ventilation.

4.4.2.3 Lighting

Illumination levels inside the school must be adequate and should conform to the existing code.

4.4.2.4 Access

There shall be two (2) doors opening out per room.

4.4.3 Audio -Visual Facilities

4.4.3.1 Personnel

1. There shall be one (1) full-time audio-visual technician or assistant for maintenance and distribution of audio-visual electro-mechanical equipment.

2. There shall be one (1) full-time audio-visual technician or assistant for audio-visual production and faculty assistance per 120 engineering faculty members or fraction thereof.

3. "Full-time" for audio-visual means that the required number of audio-visual technicians or assistants are present at all times when classes are being conducted on campus.

4.4.3.2 Equipment

The school/college of engineering shall have at least one (1) of each type of the following audio-visual equipment:

1. Overhead Projectors
2. Audio-Video Player
3. Sound System
4. Television
5. LCD Multi-Media Projector
6. Duplicating Machine
7. Supplies

   The school administration shall provide engineering faculty members with materials for the production of visual aids. This requirement should be a line item in the school budget, if the finances of the school warrant.

8. Maintenance

   All audiovisual equipment shall be maintained in good working order or shall be replaced if beyond repair.

9. Staff Training

   The school administration shall provide for all engineering faculty members an annual training program in the use of audiovisual equipment and in the production of audiovisual instructional materials.

10. Storage and Cataloguing

    All audiovisual materials shall be stored, catalogued and classified.

4.5 Instructional Materials, Methods and Support

4.5.1. Instructional Materials

4.5.1.1 Materials

The school shall provide an adequate number of materials, which can be used to undertake innovative teaching. The materials can be in the form of books, CD-ROMs, papers presented in

conferences, articles found in magazines or published experiences rendered by outstanding faculties in the past.

4.5.1.2 Curriculum/revision

1. The curriculum of each engineering course that a school /college of engineering offers shall meet the minimum requirements set by the Commission on Higher Education. Any deviation from the prescribed requirements shall have the prior clearance or approval by the Commission.

2. The example syllabi in the different fields of engineering as provided by the Commission on Higher Education shall be observed by the faculty member in the corresponding courses as well as in such other curricula as may be authorized.

3. Each school/college of engineering shall have a continuing curriculum development and revision program in each engineering field it offers, which should be realistic in scope and coordinated with its available laboratory facilities and equipment, taking into account local needs.

4.5.1.3 Basic Skills

If the circumstances of students and the school finances so warrant, the following remedial measures may be taken to improve basic skills:

1. The school may offer remedial courses in basic mathematics and English language skills.

2. Within each course syllabi there shall be some course component directed towards improving student proficiency in the skills of reading, writing and speaking technical English.

3. The requirement mentioned above shall be applicable in every course in the engineering curricula.

4.5.1.4 Laboratory and Field Experience

The school/college of engineering shall ensure that:

1. Each curriculum year includes at least one (1) science or engineering laboratory experience in school, or one (1) field visit to industry, or one (1) cooperative on-the-job training program experience, for all engineering students.

2. All laboratory course activities shall involve the following:

   a. hands-on manipulation of apparatus and equipment by each and every student;

b. experimental procedures carried out by students which require the collection, reduction and analysis of data;

c. writing of individual report with emphasis on the development of skills in technical communication or the use of adequate oral substitutes to increase student proficiency in oral technical English; and

d. encouragement on the use of simulation software.

4.5.1.5 Continuing Professional Development

The school/college of engineering shall make available its facilities for continuing education development programs for practicing engineers on current engineering technologies in each field of engineering for which it is authorized to operate.

4.5.2 Methods

Teaching innovations to improve the methods of teaching and learning shall be developed by the school administration and shall be evaluated by the faculty for its effectivity.

4.5.3 Support for Improving Teaching and Learning Methods

The administration of each institution and of the engineering school shall encourage faculty to participate in the development of teaching and learning methods and to improve their teaching efficiency by using more innovative teaching methodologies.

Section 5. Research

Faculty Research.

Faculty members actively engaged in relevant and significant research work in engineering shall be afforded special privileges and benefits such as reduced teaching load and /or its equivalent without diminution of pay or additional compensation on top of his regular load.

5.1 Personnel

For the development of research, the institution shall designate a competent research director, research assistants and other personnel for the research office.

5.2 Organization/Budget

There shall be an organization for the research function to be carried out effectively. Research funds shall be allocated.

5.3 Facilities

There shall be adequate facilities to accommodate the research works of students and faculty members.

5.4 Output

5.4.1 Documentation

There shall be a documented research output.

5.4.2 Publication

Research papers should be published in refereed journals.

5.4.3 Industry

As much as possible, there shall be an external agency support for research.

Section 6. Community Involvement

6.1 Personnel

There shall be an appointed supervisor to coordinate community extension projects.

6.2 Organization/Budget

There shall be an organization for the effective implementation of community extension projects. Funds for community extension projects shall be allocated.

6.3 Facilities

There shall be adequate facilities for community extension projects.

6.4 Output

6.4.1 Community Extension Services

The administration of each school/college of engineering shall maintain close relations with local industries, professional societies and the general public for recruitment and placement of graduates as well as providing educational services to these groups.

6.4.2 Consultancy

The administration of each school/college of engineering may allow their faculty to engage in consultancy services as long as these services do not adversely affect the faculty member's performance.

6.4.3 Industry-Academe Linkage

The college shall establish and maintain satisfactory relationship with the industry for the on-the-job training of their students. The institution shall give/allot financial assistance to the project.

6.4.4 School Linkages

The school/college is encouraged to maintain linkages with other schools.

6.4.5 Faculty Exchange

The school/college is encouraged to have a faculty exchange program with other schools.

Section 7. Administration and Support

7.1 Personnel Qualification & Performance

7.1.1 College /Department Administrators

The school/college of engineering shall have (1) a full-time dean, (2) a full-time department head in each curricular/program area on reduced teaching loads (no more than 80% of full-time teacher's teaching load), and (3) at least a full-time assistant dean, whenever needed, to adequately support the administrative functions of the dean.

7.1.1.1 Qualifications

1. The dean of the school/college of engineering shall be:

   a. holder of baccalaureate and masters degree in engineering, preferably in the fields/programs being offered by the school;

   b. preferably holder of doctorate degree in engineering or related fields;

   c. must have a minimum teaching experience of not less than five (5) years, at least five (5) years administrative experience and at least 5 years field experience; and

   d. registered engineer.

2. The department head of each program shall be:

   a. holder of baccalaureate degree and master's degree in engineering in their field of specialization

   b. registered engineer

7.1.1.2 Duties

All administrators shall provide leadership in the following:

1. curriculum development and coordination of curricular offerings, textbook adoption, evaluation procedures, methodologies of instruction, departmental activities and professional development for school personnel;

2. recruitment, placement and promotion of faculty members and other administrative staff in the school/college of engineering;

5. budgeting, allocation and requisitions .

7.1.1.3 Teaching Load

The assignment of the semestral teaching load of the deans and assistant deans shall be an internal policy of the school.

7.1.2 Support Staff

Support staff shall be provided for both the office of the dean and the office of the faculty members of engineering.

7.2 Organization

There shall be a governing body responsible for the formulation of general policies of the institution. A published organizational structure, which specifies the lines of authority and responsibilities among administrative personnel, must be available.

7.3 Governance

7.3.1 Administrator/Faculty Involvement

1. The dean shall be involved in the formulation and implementation of a Long-Range and Institutional Development Plan for the College, to ensure that the plan be well documented for efficient periodic review and update.

2. The faculty members shall be consulted/involved in the development and revision of the curriculum

7.3.2 Services for the Students

Each school/college of engineering shall provide and maintain the following student services programs:

7.3.2.1 Medical and Dental Care (diagnostic, first aid, preventive) Program

7.3.2.2 Support for Career Guidance and Job Placement

The school/college of engineering shall provide and maintain the following student services programs:

1. assistance in organizing student employer interviews;
2. maintenance of a job-available card file with an index of potential local employers;
3. willing assistance to employers; and
4. facilitate issuance of students' academic transcripts.

The guidance program shall involve both initial and continuing evaluation of students' aptitude for engineering education, which may be conducted within the institution's overall guidance program. This should include the following:

1. students' orientation program;
2. placement testing; and
3. psychological counseling.

7.3.2.3 Support for Co-curricular Activities.

The school/college of engineering shall have student co-curricular engineering activities directed towards individual development and entrance into the profession.

7.3.3 Policies for Selection and Retention

Each institution shall have a clear selection and retention policy.

7.3.3.1. Admission Requirements

1. Admission

The administration of each school/college of engineering shall require all students to meet the following entrance standards:

a. All students shall pass an engineering aptitude examination administered by the school/college of engineering before being admitted to an engineering program.

b. The school shall have established minimum standards for aptitude test scores for students enrolled in any engineering program.

2. Graduation

Each student shall satisfy all requirements for graduation as provided by existing school and CHED rules and standards before being awarded a degree in a specific field of engineering education program.

7.3.3.2 Retention Policies

There shall be a written retention policies being implemented by the school for both the students and faculties to maintain quality academic standards.

7.3.3.3 Transferees

Students who transfer to the college shall have their records evaluated so that subjects taken by the students in other institutions can be credited.

7.3.4 Publications

7.3.4.1 Course Catalogue

The administration of each school/college of engineering shall publish a college course catalogue, which shall contain information that would fully inform the public of its policies, programs and procedures. Such a catalogue shall be updated at least once every five (5) years.

7.3.4.2 Class Schedule

The school/college of engineering shall publish a schedule of classes for students and faculty use prior to the enrolment period of each semester.

7.3.4.3 Staff Handbook

The administration shall provide all professional staff members with a handbook updated at least once every five (5) years containing the following:

1. employment requirements;
2. employment benefits (such as salary, rank, fringe benefits, etc.);
3. classrooms and laboratory teaching procedures and practices;
4. available teaching resources;
5. textbook selection procedures;
6. procurement policies and procedures;

7. promotion policies; and

8. evaluation policies and instruments.

7.3.4.4 Student Handbook

The administration of each school/college of engineering shall provide all students with a student handbook updated at least once every five (5) years containing the school policies and regulations pertaining to all students enrolled in engineering courses, the institution's mission statement, its basic academic and disciplinary policies, rules and regulations and the activities and services at the institution.

7.3.4.5 Faculty Manual and Roster

The administration of each school/college of engineering shall publish a current faculty directory or faculty roster that contains the institutions' mission statement, objectives, its basic academic and disciplinary policies, rules and regulations, faculty status, appointments and advancement in rank, duties and responsibilities of faculty members and benefits and services for faculty members.

7.3.4.6 Administrative Manual

The Administration shall publish a manual, which contains information regarding the school's incorporation and governing Board of Trustees and the roles and responsibilities of the officers of the institution.

7.3.4.7 Budget

The dean of engineering shall be informed about the amount of funds available for equipment acquisition, maintenance, repair, and supplies allocated to the college.

7.3.4.8 Procurement

Established procedures for procuring new laboratory equipment.

7.3.4.9 Policies and Regulations

Each engineering faculty member shall be provided with school policies and regulations updated at least once every five (5) years.

7.3.5 Records

7.3.5.1 Enrolment

A record system of student enrolment by engineering field of study and enrolments for all classes and laboratory courses shall be maintained by the institution's administrative office.

7.3.5.2 Achievement

A permanent record system of student grades shall be maintained.

7.3.6 Sustainability

The administration should allow the school/college of engineering to undertake additional improvement of its human and material resources without relying on tuition fees alone. The methods that can be used for undertaking a sustainability program may be any of the following:

1. establishment of endowment fund;
2. scholarship donated for students or faculty to avail;
3. outright gifts and grants given by alumni and friends;
4. regular donation from external funding institutions and government;
5. donation in kind (books, journals, equipment & etc.;
6. matching grants;
7. sharing of expertise in the form of undertaking seminars, conferences and lectures;
8. academe-industry programs which will help the school;
9. assistance of alumni and friends in soliciting aid from external source; and
10. any other form of assistance to help the school upgrade itself.

7.4 Site and Buildings

7.4.1 Institutional Site and Buildings

The school must own its buildings and land, but in any case a long-term lease of at least fifteen (15) years may be acceptable.

7.4.2 College Site and Buildings

7.4.2.1 Site

The site and size of the school/college of engineering should be adequate to meet the needs of its present population and future expansion.

7.4.2.2 Adherence to the Codes

School buildings shall be designed and constructed in conformity with the provisions of the current National Building Code and the National Fire Code.

7.4.2.3 Office Space

1. The school/ college of engineering shall provide adequate office space for the administrators of the engineering program.

2. The school/college of engineering shall provide and maintain faculty rooms and conference rooms.

7.4.3 Health and Safety

All classrooms and laboratories in the school/college of engineering shall be clean and properly maintained to meet public health and safety regulations

1. Toilets shall be kept clean and properly maintained to meet public health and safety regulations, and shall be free of obnoxious odors.

2. Physical education and recreational areas shall conform with all rules and regulations pertaining to safety and suitability

3. Actual occupancy load of instructional rooms shall be properly observed and maintained.

4. The capacity load of instructional rooms with an occupancy capacity of more than fifty (50) students, where fixed seats are not installed, shall be posted in a conspicuous place, preferably near the main exit of the structure.

5. All corridors shall be free of obstructions. Spaces under stairs shall not be used for storage of combustibles. All stairways shall have handrails and non-skid surfaces.

6. There shall be a working fire alarm and fire fighting system.

7. Each instructional space shall be easily evacuated by all of its occupants within 60 seconds. All external and laboratory doors, except in corridors, shall be open outward.

8. Adequate custodial support services shall be provided.

ARTICLE IV – NON-COMPLIANCE OF STANDARDS

Section 8. **Issuance of Renewal Permit.** Upon denial of applications for recognition or for additional year level(s) due to non-compliance with the requirements, renewal permit may be issued for one (1) academic year only.

Section 9. **Recognized/Unrecognized Engineering Program.** The curricular guidelines for Engineering Education shall be observed in the implementation of the requirements for recognized and unrecognized engineering programs.

Section 10. **Offering of Program.** An engineering program shall be offered under the college of engineering.

Section 11. **Advertisement.** No announcement or advertisement shall be made of any engineering program or course until its authority to operate has been given by the CHED.

ARTICLE V- REPEALING CLAUSE

Section 12. All issuances, including but not limited to the CMO 34, series of 2001 and/or any part thereof inconsistent herewith, are deemed repealed or modified accordingly.

ARTICLE V I - EFFECTIVITY CLAUSE

Section 13. This CMO shall take effect starting SY 2006-2007.

Pasig City, Philippines July 22, 2005.

For the Commission:

CARLITO S. PUNO, DPA
Acting Chairman