

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



CHED MEMORANDUM ORDER (CMO)

No. 12

Series of 2002

**SUBJECT: REVISED POLICIES, STANDARDS AND GUIDELINES FOR
MASTER OF SCIENCE IN AGRICULTURAL ENGINEERING
PROGRAM**

In accordance with the pertinent provisions of Republic Act No. 7722, otherwise known as the "Higher Education Act of 1994", and by virtue of Resolution No. R10-2002 dated January 25, 2002, the Revised Policies, Standards and Guidelines for Master of Science in Agricultural Engineering Program are adopted for information, guidance and compliance of all concerned, thus:

I. GUIDELINES

A. Mission Orientation

An institution offering the Master of Science in Agricultural Engineering (MSAE) program should aim to produce graduates who can undertake scholarly work and provide leadership in the continuing development of the discipline and its practice as a profession.

B. Programs

1. Instruction

The Bachelor of Science in Agricultural Engineering (BSAE) minimum standards must first be satisfied before an institution can apply for a MSAE program.

The MSAE program shall be operated only by institutions with authority granted by the Commission on Higher Education (CHED).

The MSAE program should include specialization and tool courses; elective courses in major and allied fields to meet the needs of the students in their present or future endeavor, and in conducting thesis research.

2. Research and Extension

Research and extension programs are essential to meet national development needs as well as to provide dynamism and relevance to the instructional program. This will ensure that the faculty members not only

contribute to the body of knowledge in their major areas of specialization but also to gain field experience for more effective teaching.

The institution must also undertake extension activities to translate significant research output into forms that can be utilized for agro-industrial and technological advancement.

Institutions offering graduate programs are encouraged to provide slots for research and teaching assistantships. Research assistants may be hired by graduate faculty doing funded research.

C. Resources

1. Faculty

There should be a minimum number of qualified professors to teach major courses, serve as thesis advisers, as well as to handle other courses supportive of the major discipline.

2. Student

For the M.S. program to be viable, the institution must be able to attract a minimum number of highly qualified students.

3. Physical Facilities and Equipment

As a prerequisite to offering the MSAE program, there must be adequate and up to date facilities and equipment that should be made available to the students.

4. Financial Support

The institution must have sufficient financial resources to support instruction, research and extension activities.

D. Admission Policy

The institution should adopt an admission policy that assures that only highly qualified students may enter the MSAE program.

E. Organization

Programs and resources of the institution should be administered in such a way that undergraduate and graduate degree programs must be distinct from each other as well as from the research and extension functions of the institution though these are complementary and interdependent.

F. Quality of graduates

The institution must establish a means of measuring the quality of graduates of the MSAE program.

II. MINIMUM STANDARDS

A. Programs

1. Instruction

To complete the MSAE program, the student must pass a minimum number of 30 units broken down as follows: six (6) units of thesis; fifteen (15) units of courses in the major field including a seminar and special problems/topics; and nine (9) units in the cognate/minor field.

2. Research and extension

Research and extension funds and facilities must be provided to enable the faculty to do creative research work. The faculty should therefore be allotted load credits for official time devoted to research and extension work.

Research and extension funding could come from internal and or external sources.

Applied research and extension programs should be established to meet the development needs of the region and to provide dynamism and relevance to the instructional program.

B. Resources

1. Faculty

- a) To offer the MSAE program, the institution must have at least one (1) full-time faculty who is a doctoral degree holder and at least three (3) full-time faculties who are master's degree holder in the discipline.
- b) To teach graduate courses in the discipline, a faculty member must have at least a masters degree in agricultural engineering or allied disciplines from a reputable institution and has passed the board exam.
- c) To act as thesis adviser or member of the guidance committee in a major discipline, a faculty member must have at least an MS degree in Agricultural Engineering or allied disciplines from a reputable institution. In addition, he must be the senior author or

co-author of at least two technical articles other than his masteral or doctoral dissertation published in a reputable national/international scientific journal.

- d) To teach graduate courses supportive to the major discipline. A faculty member must have at least a master's degree in his major area of specialization.
- e) The maximum faculty-student ratio is 1:10 using the full-time equivalent (FTE) for teaching as basis.

2. Land

There should be a minimum of five (5) hectares of experimental land in addition to the minimum requirement for BSAE program.

3. Physical facilities and equipment

a. Building requirements

- i) School buildings should comply with existing zoning and building regulations.
- ii) The laboratory floor space should be at least 2.3 sq.m. per student.
- iii) The classroom floor space should be at least 1.5 sq. m. per student.
- iv) Circulation and space should be 30 percent of the total area of the room.

b. Minimum laboratories (with equipment and facilities) for graduate research and instruction.

The building and equipment for such facilities should be adequate for the conduct of laboratory exercises prescribed for the courses and thesis research work.

One Laboratory for Farm Power and Machinery
One Laboratory for Soil and Water Resources
One Laboratory for Agricultural Processing and electrification
One Laboratory for Agricultural Structures and Environment
One micro-computer Laboratory
One Engineering Shop
One Laboratory for Instrumentation

c. Library

- i) Library seating capacity of 20 percent of the combined total of graduate students and academic staff.
- ii) At least five (5) titles of graduate reference books in every subject offered (less than ten years old).
- iii) Subscription of at least two (2) peer-reviewed professional journals. The use of CD-ROMS, Internet and other education technologies is encouraged.

These library requirements shall be accessible to graduates students.

d. Support services

i) Health service

There should be adequate functional medical and dental clinics for students, staff and their dependents.

ii) Student services

There should be adequate student accommodation, food service, recreational facilities and counseling and graduate placement service.

e. Administrative services

Accounting, property procurement, security and auditing services should support the instruction, research and extension activities.

C. Organization

The head/dean of the unit offering MSAE program shall be a holder of a doctoral degree who has published works in refereed journals in an appropriate discipline.

The designated Graduate program Coordinator or Department Chairman shall be a holder of a doctoral degree in any of the graduate fields offered by the institution.

D. Admissions Policy

The school must create a graduate admission committee to set the admission requirements that may be based on the following:

1. Qualifying Grade Point Average (GPA) for incoming MSAE students;
2. Passing the Agricultural Engineering Board Examination;
3. Above-average grade in the physical sciences courses; and
4. Other criteria relevant to the MS degree program.

E. Quality of Graduates

To ensure the high quality graduates, student in the MSAE must meet the following suggested requirements:

1. Must have a GPA of 2.0 or its equivalent; and
2. Must show ability to write in a scientific paper and reputable journal.

Pasig City, Philippines July 4, 2002


ESTER ALBANO GARCIA
Chairperson