

**AMERICAN COUNCIL FOR
CONSTRUCTION EDUCATION**

DOCUMENT 103MD

**STANDARDS AND CRITERIA FOR
ACCREDITATION OF MASTER'S
DEGREE CONSTRUCTION
EDUCATION PROGRAMS**



AMERICAN COUNCIL FOR CONSTRUCTION EDUCATION

DOCUMENT 103MD

**STANDARDS AND CRITERIA FOR
ACCREDITATION OF MASTER’S DEGREE CONSTRUCTION
EDUCATION PROGRAMS**

Table of Contents

I. INTRODUCTION.....1
 Purpose1
 Institution and Program Eligibility1

II. ORGANIZATION AND ADMINISTRATION1
 Institution.....1
 Master Degree Program.....2
 Budget3

III. CURRICULUM3
 3.1 Purpose3
 3.2 General Requirements4
 3.3 Curriculum – Baccalaureate Degree Programs5
 3.3.1 Preliminary Learning Outcomes5
 3.3.2 Program Learning Outcomes.....5
 3.4 Distance Learning Courses.....6

IV. FACULTY AND STAFF7
 Qualifications7
 Faculty Work Load.....7
 Administrative and Technical Staff Support8
 Employment Policies.....8
 Professional Development8
 Faculty Evaluation.....8

V. STUDENTS.....8
 Admissions and Enrollment8
 Academic Progress9
 Extracurricular Activities 9

VI. FACILITIES AND SERVICES9
 Physical Facilities.....9
 Library 10
 Services10

| | | |
|-------|----------------------------------------------|----|
| VII. | RELATIONS WITH INDUSTRY | 10 |
| | Support from Industry | 10 |
| | Support for Industry | 10 |
| | Student-Industry Relations | 10 |
| VIII. | RELATIONS WITH THE GENERAL PUBLIC..... | 11 |
| IX. | PROGRAM QUALITY AND OUTCOME ASSESSMENT | 11 |
| | Academic Quality Plan..... | 11 |
| | Planning and Evaluation..... | 12 |
| | Application | 12 |
| | Resources..... | 12 |

I. INTRODUCTION

1.1 Purpose

The purpose of this document is to define the standards and criteria by which those construction education master's degree programs seeking accreditation or re-accreditation by ACCE shall be assessed. Assessment shall be by peer educators from other programs in concert with construction practitioners, representatives of the construction industry associations and organizations, and society at large. Assessment shall occur through an on-site visitation by a designated team following procedures specified in Document 101MD.

1.2 Institution and Program Eligibility

To be considered for accreditation, a program in construction education must:

- Be located in an institution of higher learning that is legally authorized under applicable law to provide a program of education beyond that of the secondary level. Furthermore, in the case of those institutions in the United States, be accredited by the appropriate regional accrediting agency, and in the case of other countries, be accredited by the accrediting agency appropriate for its locale, if such exists.
- Have been in operation for sufficient time to permit an objective evaluation by ACCE of its educational program and must have had at least one graduation cohort
- Offer a master's degree program with a major emphasis on professional construction education.

II. ORGANIZATION AND ADMINISTRATION

2.1 Institution

The organizational structure of the educational institution should provide a basis for establishing authority and responsibility, utilizing resources and achieving goals within the construction education administrative unit. It is expected that the master's degree program functions within the framework established for the educational institution and is consistent with the institutional mission and assessment procedures. The administrative function and responsibilities should be accepted and discharged within the context of appropriate experience, preparation, and commitment.

A successful master's degree program will reflect the importance of having strong administrative leadership based firmly upon specific administrative procedures

and policies. Educational institutional support of the administration of the construction education administrative unit should accord status within the institution comparable to that of other academic units of similar size and function with regard to finances, staffing, teaching loads, promotions in rank and salary, appointment to educational institution policy-making committees, program priorities, and other academic affairs.

It is recognized that varying types of administrative structures are possible and acceptable to accomplish the goals of the educational institution. There should exist a well-defined and documented formal organizational structure. Areas of authority and responsibility must be clearly defined and adhered to. The administrative staff should be well balanced in all functional areas--e.g., student counseling and advising, budget management, academic administration, teaching effectiveness, involvement with local industry and, where appropriate, research, and extension.

For each goal there should be an area of assigned administrative responsibility indicating a commitment by the governing body to achieving that goal. In addition, it must be determined if the educational institution administration has a generally positive attitude and support for the master's degree program. This should be verified by discussion with the construction unit administrators and faculty and with all levels of administration within the educational institution.

2.2. Master's Degree Program

The master's degree program must be headed by qualified administrator who is knowledgeable and committed to the construction profession and is empowered by the educational institution with sufficient authority and given sufficient support and time to accomplish the program's goals and objectives. The institution must clearly define who the designated administrator of the master's degree program is along with his or her responsibilities and authority. In the case where more than one person has administrative responsibilities and authority, it should be clearly delineated in appropriate institutional formats. The administrator should provide sufficient leadership and supervision to develop a strong academic master's degree program. To this end the educational institution and the master's degree program administrator must insure that the total administrative workload is carefully controlled in relation to the total workload of the administrator. The organizational structure of the master's degree program should be designed to encourage communication, coordination, and interaction between administrative officers, faculty, and students within the program, other disciplines, and other educational institutions. The administrative structure must be sufficiently flexible to make the functional changes necessary to attain the program objectives. To the extent institution policies permit, the administrator should encourage professional development of faculty through such means as leaves of absence for gaining professional experience, study and research, participation in professional organizations, and attendance at professional meetings and workshops. The

administrator and the faculty must cooperate to develop a construction education master's degree program of high quality and establish a structure to facilitate planning and evaluation for continuous improvement of the total program.

It is important that the construction master's degree program have a well-defined organization in order to achieve its stated goals and objectives. The effectiveness of the leadership of the master's degree program can be ascertained from the clarity and conciseness of policies and decision-making relative to curriculum, faculty, students, and facilities. Program organization must be structured to ensure the future capacity of the program to achieve its purposes.

A construction program can benefit from closely related programs such as architecture, engineering, and business. The use of appropriate courses, the interaction of faculty, and the interaction of students are all positive indicators of a valuable and beneficial relationship with closely related programs. Experimentation and innovation are encouraged in teaching methods and curriculum.

2.3 Budget

Financing for the master's degree program is an indication of administrative support for the program. Budget allocations must be compatible with the size of the unit with respect to students, faculty, and staff. An important indication of institution support is adequate funding of the master's degree program including: competitive salaries, support for materials and supplies, laboratory facilities and equipment, and other needs of the program. Adequate budgetary support must be provided to the master's degree program by the institution to enable the program to achieve its stated purposes. In addition, projected resources must be adequate to ensure the capacity of the program to achieve its planned future goals and objectives.

Relative to the sources of funds to support the master's degree program, it is necessary to determine the extent of non-budgeted funds (soft monies, donations, etc.) that are used for faculty development, including travel. Non-budgeted funds should be used to supplement institution funds allocated by the administration rather than to replace those funds.

III. CURRICULUM

3.1 Purpose

The purpose of the curriculum is to provide an education that will lead to a leadership role in construction and to prepare the student to become a responsible member of society. The curriculum should be responsive to social, economic, and technical developments and should reflect the application of evolving advanced

knowledge in construction beyond that associated with a baccalaureate degree program in construction education.

The ACCE encourages accredited programs to regularly evaluate current curricula for and develop new curricula that reflect changing construction technologies and management trends.

The master's degree program must be consistent with the philosophy and the purposes of both the institution and construction education unit. The curricular goals of construction programs must be related to the needs of society and the construction profession.

The ACCE recognizes the autonomy of educational institutions in the matter of curriculum development, and the levels and designations of the degrees awarded upon completion of the various master's degree programs. At the same time, it is preferred that the word "Construction" be included in the name of the degree awarded just as other professional disciplines name the profession in the degree awarded.

The ACCE also recognizes the autonomy of educational institutions in establishing standards and policies pursuant to acceptance of transfer credits for educational courses from either accredited or non-accredited undergraduate institutions.

3.2 General Requirements

It is assumed that each construction unit will develop its own master's degree program goals and objectives and particular emphasis, and will prescribe the number of courses for graduation, sequencing of study, course numbers, and titles.

The curriculum should be designed to accommodate continually expanding requirements of the profession, advancements in knowledge, and the contributions of related disciplines. Master's degree programs seeking accreditation should strive to provide offerings that exceed the ACCE standards and criteria for accreditation.

To accurately assess a master's degree program's curriculum and whether it meets the ACCE master's degree program competencies syllabi must be provided for each course taught by the construction unit which includes the course objectives in relation to the program goals and objectives, instructional methods, a topical outline and method of assessment. Syllabi must be presented in a standard consistent format.

In addition, programs must provide at the time of the visit:

- Copies of textbooks, laboratory manuals and reference materials used, in order to determine appropriateness, adequacy of coverage, and currency of texts and other reference materials.
- Copies of examinations and quizzes, research and professional papers, laboratory reports, thesis and any special study assignments given which are representative of student work and not a compilation only of the best work.
- Evidence of any contact the master's degree students may have with research, community service and internship or similar professional experiences.
- Student records for compliance with master's degree program curriculum requirements and policies

3.3 Curriculum

Master's degree programs must demonstrate that there exist specific learning outcomes for applicants to the program and for students enrolled in it. For the purpose of this document the former are referred to as Preliminary Learning Outcomes and the later as Program Learning Outcomes.

3.3.1 Preliminary Learning Outcomes

Applicants to an accredited ACCE master's degree program must demonstrate a high level of knowledge and understanding of the use and application of construction principles and technology required to be successful in the program including core competencies of cost estimating, scheduling and project management. Master's degree programs seeking accreditation must:

1. Identify the minimum acceptable preliminary learning outcomes required of applicants.
2. Describe how the mastery of the preliminary learning outcomes are assessed by the master's degree program.
3. Explain what actions are taken for students who do not meet the minimum preliminary learning outcomes necessary for acceptance into the master's degree program.

3.3.2 Program Learning Outcomes

The development of professional skills and knowledge is a central requirement of an ACCE accredited master's degree program. ACCE requires that all graduates of accredited master's degree programs be able to demonstrate mastery of the following:

1. Critical thinking and creativity
2. Problem solving and decision making
3. Effective and professional oral and written communications
4. Use of information and communication technology
5. Principles of leadership in business and management
6. Current issues in construction
7. Complex project decision making and associated risk management
8. Professional ethics including application to situations and choices
9. Advanced construction management practices
10. Research methods

For each category, programs seeking accreditation by ACCE must

1. Define program learning outcomes for each category.
2. Cross reference each program learning outcome to relevant course objectives and/or other evidence.
3. Describe how each program learning outcome is assessed.

3.4 Distance Learning Courses

Distance learning courses may be incorporated in an accredited master's degree program's curriculum under the following conditions:

- ◆ The distance learning courses will be accepted for transfer credit as reviewed and accepted by the accredited university programs.
- ◆ The master's degree program standing for initial accreditation or renewal of accreditation shall display the same kind of distance learning course material for evaluation as set forth in this document for a conventionally offered classroom lecture or laboratory course.
- ◆ Construction specific courses shall be evaluated for content as set forth in this document.

IV. FACULTY AND STAFF

4.1 Qualifications

In determining the qualitative and quantitative adequacy of the master's degree program faculty and staff, various criteria are applied. Significant emphasis is placed on the qualifications and responsibilities of the construction faculty.

The faculty should possess appropriate academic qualifications, professional experience, and pursue scholarly and creative activities essential to the successful conduct of an academic program of construction. If required by the institution, faculty members will be accorded status as a member of the Graduate Faculty. To ensure that the master's degree program is competitive in seeking faculty members, the educational institution must provide the faculty with rank, status, salary, and benefits commensurate with their educational background and professional experience.

The educational preparation of each faculty member must include study in the areas for which he has teaching responsibility and include adequate background in the supporting disciplines from which his area of specialty draws major concepts and principles.

Evaluation of faculty competence must recognize appropriate professional experience as being equally as important as formal educational background. Continuing professional growth of the master's degree program faculty is a prerequisite to effective teaching. In addition, the faculty should actively participate in professional organizations and community services, and in interpreting construction education to other professions and to the general public. The size of the master's degree program faculty should be commensurate with the number of courses offered, the number of students enrolled, and the other responsibilities of the faculty. The faculty should be appropriate to the type of instruction and comparable to that of the faculty of other academic programs of the institution. The institution should recognize the total professional responsibilities and services (in addition to the teaching assignments) of each faculty member.

4.2 Faculty Work Load

It is important that the faculty workload be distributed fairly. It is recognized that workload assignment is a difficult process and requires the qualitative judgment of the administrator. The following factors should be considered in the determination of a work load: number of lecture hours, number of laboratory hours, number of separate preparations, class size, availability of teaching assistants, counseling activities, administrative activities, committee assignments, extension or continuing education commitments, and research activities.

4.3 Administrative and Technical Staff Support

Administrative and technical staff support should be adequate to sustain fulfillment of the construction master's degree program's mission and be consistent with the level of support enjoyed by other program units within the parent institution.

4.4 Employment Policies

It is recognized that salary may not be a primary motivation or reward for good teaching. However, it is important that faculty compensation be competitive with comparable positions in other institutions and industry to insure that quality faculty and high morale exist. It is expected that construction master's degree program faculty have some assurance that adequate financial security is provided.

4.5 Professional Development

A clearly defined program of professional development is required to maintain a high level of professional competence. Caution should be exercised to prevent any faculty member with a strong area of expertise from being given teaching assignments that limit opportunity to develop other areas of expertise.

Consulting work is desirable and encouraged, provided such activities do not conflict with normal assigned duties and responsibilities of the faculty member. Administrative policy should insure that opportunities for professional development are made available and used by the entire faculty.

4.6 Faculty Evaluation

A clearly defined program of faculty evaluation is required in order to assure the maintenance of high quality instruction. These evaluations should be made annually, and may include student, peer, and/or administrator evaluations.

V. STUDENTS

5.1 Admissions and Enrollment

It is important that attention be given to the capabilities and professional motivation of students entering the construction master's degree program. It is recognized that no single criterion for the admission of students can predict the potential for success of the individual. However, it is generally accepted that established national norms of standardized tests are of value in predicting academic achievement. Qualifications of students admitted to a program in construction education should be comparable with those of students in other areas of the institution and appropriate to the requirements for construction education.

Entering students should have academic abilities appropriate to the respective institution, motivation, and career orientation. Recruitment should be directed

toward those individuals with high academic achievement as well as those with defined career goals in construction. Admissions policies should be directed toward students with the ability and credentials for successful completion of the curriculum.

If constraints on construction program enrollment exist, such constraints should be the result of a broad institution policy rather than from the desire for convenient administration of the program. Recruitment and publicity for the construction master's degree program should be comparable to other master's degree programs of the institution including opportunities for financial assistance.

5.2 Academic Progress

There must be an organized system of counseling and professional guidance available to all students in the master's degree program so that their needs, interests, and abilities are considered in preparing and implementing a plan of study. The academic advising and counseling procedures should include a close relationship between the individual student and the construction faculty. A record system should exist that keeps both the student and advisor informed regarding the student's progress toward completion of master's degree requirements.

It is important that academic performance be monitored. High academic achievement should be recognized and rewarded. Low academic achievement should be detected and appropriate actions taken. This is especially important if the admissions process does not provide for initial screening of students.

5.3 Extracurricular Activities

It is recognized that not every master's degree program is able to provide the opportunity for student participation in extracurricular activities. Extracurricular activities provide valuable interpersonal and leadership experience. Thus, where applicable, students should be encouraged to participate in activities in addition to their academic studies. Such activities should include involvement with industry-based professional and trade organizations. The extent of participation by students in extracurricular activities is an indication of the unity of the student body and promotes interest in citizenship and professional societies after graduation.

VI. FACILITIES AND SERVICES

6.1 Physical Facilities.

Appropriate and well-maintained facilities need to exist that are appropriate to the type of instructional delivery taking place. It is desirable that facilities exist solely for the master's degree program as a means of enhancing its unique identity within the institution.

6.2 Library

The library is a critical resource of any educational system. Adequacy of the library facilities must be shown in the scope and depth of library holdings as related to the general and professional components in the field of construction. Adequacy should also be reflected in the acquisition of current publications relative to construction. There should be evidence of both adequacy and use in the selection of library materials, and of responsibility for their effective use.

6.3 Services

Appropriate services on campus should be used effectively by the master's degree program. These include the computer center, audiovisual, placement and student services, and financial aid.

VII. RELATIONS WITH INDUSTRY

7.1 Support from Industry

Construction is a practice-oriented profession. Therefore, it is imperative that an advisory committee, consisting of representatives from the construction industry, be actively involved in an advisory role for the construction master's degree program.

The committee should meet at least once a year for the purpose of advising and assisting the development and enhancement of the master degree program. Although the composition of the committee should change periodically, there should be provisions to ensure continuity. The composition of the committee should be representative of the potential employers of the graduates of the master's degree program.

7.2 Support for Industry

There should be an active program of continuing education and research (where required by the institution) directly applicable to and in support of the construction industry. The master's degree program should maintain continuous liaison with the various constituencies it serves for the purpose of establishing educational and professional development activities for the construction industry.

7.3 Student-Industry Relations

Communication and participation among faculty, students and the construction industry should be well documented through industry involvement such as field trips, speakers and active participation in activities of construction related organizations. They should also consider opportunities to obtain construction related experience through participation in construction industry internships.

VIII. RELATIONS WITH THE GENERAL PUBLIC

Accredited programs shall manifest accountable behavior in providing information for release in any manner to the general public.

- Institutions should broadly and accurately publish the objectives of the master's degree program, admission requirements, program assessment measures employed and the information obtained through these assessment measures, student achievement, the rate and types of employment of graduates, and any data supporting the qualitative claims made by the program.
- No release is authorized of a master's degree program's term or period of accreditation.
- No ranking is to be implied through linkage to ACCE accreditation.
- Indication of accreditation status is authorized during any defined term of accreditation.

IX. PROGRAM QUALITY AND OUTCOME ASSESSMENT

9.1 Academic Quality Plan

The master's degree program must have an Academic Quality Plan identifying the process used for the continuous improvement of the program. This plan will serve as a tool for continual assessment and improvement of the program and be available in the administrative office for review by the visiting team.

A significant part of any assessment plan is identifying the indicators of academic quality in the master's degree program. Indicators are the measures used directly related to the constructions master's degree program's goals and are designed to provide reliable data measuring progress towards meeting those goals. The indicators and respective metrics shall be clearly stated.

The master's degree program's Academic Quality Plan will form the basis of empirically assessing the stated outcomes of the program. Assessment input should be obtained from the unit's constituencies, including students, graduates, employers, benefactors, the construction industry, and the program planners (faculty, staff, and administrators). The plans should define the quality assessment cyclic process.

Accredited master's degree programs are encouraged to utilize a certification or competency examination as a component of its Academic Quality Plan. .

9.2 Planning and Evaluation

The planning and evaluation process of the Academic Quality Plan must contain measurable outcomes; a systematic means of collecting, quantifying, and

analyzing data relevant to those outcomes; development of conclusions based on the data collected; and program modifications, when deemed appropriate to improve the master's degree program.

9.3 Application

The conclusions and inferences drawn from the quality assessment process must then be incorporated into the Academic Quality Plan. The process will generate a data profile (composite report of data) to be used in such a manner, as to foster enhancement of student achievement with respect to the master's degree program. After each comprehensive quality assessment period, the entire process should be reviewed and updated with plans for implementation for improvement recorded and cited.

9.4 Resources

Adequate resources must be available to the master's degree program so that it may structure a mission statement, goals, and outcomes, which will serve to ensure continual improvement of the program. In addition, the available resources must support a systematic means for collecting, quantifying, and analyzing data relative to the master's degree program's outcome; the formulation of conclusions based on this data; and the making of appropriate program modifications. A record of revisions identified and incorporated into the program must be kept and available.

The master's degree program planning and assessment schedule must be defined by each institution, and be consistent with the program's ACCE accreditation schedule.

April 1, 2011