Commission on Accreditation of Allied Health Education Programs

Standards and Guidelines
for the Accreditation of Educational Programs in Neurodiagnostic Technology

Essentials/Standards initially adopted in 1973; revised in 1980, 1987, 1994, 2002, and 2008 by the:
American Academy of Neurology
American Clinical Neurophysiology Society
American Society of Neurophysiologic Monitoring
ASET – The Neurodiagnostic Society
Committee on Accreditation for Education in Neurodiagnostic Technology
and
Commission on Accreditation of Allied Health Education Programs

The Commission on Accreditation of Allied Health Education Programs (CAAHEP) accredits programs upon the recommendation of the Committee on Accreditation for Education in Neurodiagnostic Technology(CoA-NDT).

These accreditation **Standards and Guidelines** are the minimum standards of quality used in accrediting programs that prepare individuals to enter the Neurodiagnostic Technology (NDT) profession or Neurodiagnostic Technologist profession with one or more of the following add-ons: Evoked Potentials (EP); Intraoperative Neuromonitoring (IONM); Long Term Monitoring (LTM); Nerve Conduction Studies (NCS); and/or Polysomnography (PSG). Standards are the minimum requirements to which an accredited program is held accountable. Guidelines are descriptions, examples, or recommendations that elaborate on the Standards. Guidelines are not required, but can assist with interpretation of the Standards.

Standards are printed in regular typeface in outline form. *Guidelines* are printed in italic typeface in narrative form.

Preamble

The Commission on Accreditation of Allied Health Education Programs (CAAHEP), American Academy of Neurology (AAN), American Clinical Neurophysiology Society (ACNS), ASET – The Neurodiagnostic Society, American Society of Neurophysiologic Monitoring (ASNM) and Committee on Accreditation for Education in Neurodiagnostic Technology(CoA-NDT) cooperate to establish, maintain, and promote appropriate standards of quality for educational programs in neurodiagnostic technology or neurodiagnostic technology with Evoked Potentials (EP), Intraoperative Neuromonitoring (IONM), Long Term Monitoring (LTM), Nerve Conduction Studies (NCS), and/or Polysomnography (PSG) add-on(s), and to provide recognition for educational programs that meet or exceed the minimum standards outlined in these accreditation **Standards and Guidelines**. Lists of accredited programs are published for the information of students, employers, educational institutions and agencies, and the public.

These **Standards and Guidelines** are to be used for the development, evaluation, and self-analysis of a NDT or NDT plus EP, IONM, LTM, NCS, and/or PSG program. On-site review teams assist in the evaluation of a program's relative compliance with the accreditation Standards.

Profession Description

Neurodiagnostics is the allied health care profession that records, monitors, and analyzes nervous system function to promote the effective treatment of pathologic conditions. Technologists record electrical activity arising from the brain, spinal cord, peripheral nerves, somatosensory or motor nerve systems using a variety of techniques and instruments. Technologists prepare data and documentation for interpretation by a physician. Considerable individual initiative, reasoning skill, and sound judgment are all expected of the neurodiagnostic professional. The most common

neurodiagnostic procedures are the Electroencephalogram (EEG), Intraoperative Neuromonitoring (IONM), Long Term Monitoring (LTM), the Polysomnogram (PSG), the Evoked Potential (EP), and Nerve Conduction Studies (NCS).

NDT Professionals: are credentialed; have met a minimum education level and related educational and performance standards; meet continuing education requirements; perform within a code of ethics and defined scope of practice; are recognized by physicians, employers, the public, governmental agencies, payors and other health care professionals; form a national society whose activities include lobbying for the profession; and contribute to the advancement of knowledge in neuroscience.

I. Sponsorship

A. Sponsoring Institution
A sponsoring institution must be at least one of the following:

1. A post-secondary academic institution accredited by an institutional accrediting agency that is recognized by the U.S. Department of Education, and authorized under applicable law or other acceptable authority to provide a post-secondary program, which awards a minimum of a certificate/diploma at the completion of the program;

2. A hospital or medical center that is affiliated with a post-secondary academic institution accredited by an institutional accrediting agency that is recognized by the U.S. Department of Education, and authorized under applicable law or other acceptable authority to provide a post-secondary program;

3. A branch of the United States Armed Forces;

4. A foreign post-secondary academic institution acceptable to CAAHEP.

The CoA-NDT strongly recommends and endorses awarding an associate's degree or higher at the completion of the program. The CoA-NDT therefore recommends that certificate programs be reserved for those students who already possess or simultaneously receive an associate's degree or higher.

B. Consortium Sponsor
1. A consortium sponsor is an entity consisting of two or more members that exists for the purpose of operating an educational program. In such instances, at least one of the members of the consortium must meet the requirements of a sponsoring educational institution as described in I.A.

2. The responsibilities of each member of the consortium must be clearly documented in a formal affiliation agreement or memorandum of understanding, which includes governance and lines of authority.

C. Responsibilities of Sponsor
The Sponsor must assure that the provisions of these **Standards and Guidelines** are met.

II. Program Goals

A. Program Goals and Outcomes
There must be a written statement of the program's goals and learning domains consistent with and responsive to the demonstrated needs and expectations of the various communities of interest served by the educational program. The communities of interest that are served by the program include, but are not limited to, students, graduates, faculty, sponsor administration, employers, physicians, and the public.

Program-specific statements of goals and learning domains provide the basis for program planning, implementation, and evaluation. Such goals and learning domains must be compatible with both the mission of the sponsoring institution(s), the expectations of the communities of interest, and nationally accepted standards

of roles and functions. Goals and learning domains are based upon the substantiated needs of health care providers and employers, and the educational needs of the students served by the educational program.

The program should document its strategy for monitoring community needs on an annual basis.

B.   Appropriateness of Goals and Learning Domains
The program must regularly assess its goals and learning domains. Program personnel must identify and respond to changes in the needs and/or expectations of its communities of interest.

An advisory committee, which is representative of at least each of the communities of interest named in these **Standards**, must be designated and charged with the responsibility of meeting at least annually, to assist program and sponsor personnel in formulating and periodically revising appropriate goals and learning domains, monitoring needs and expectations, and ensuring program responsiveness to change.

The program should identify the advisory committee composition, mission, goals, functions, and conclusions in relation to the program.

C.   Minimum Expectations
The program must have the following goal defining minimum expectations: "To prepare competent entry-level neurodiagnostic technologists in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains" or "To prepare competent entry-level neurodiagnostic technologists with additional expertise in one or more of the following add-ons: Evoked Potentials (EP); Intraoperative Neuromonitoring (IONM); Long Term Monitoring (LTM); Nerve Conduction Studies (NCS); and/or Polysomnography (PSG), in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains."

Programs adopting educational goals beyond entry-level competence must clearly delineate this intent and provide evidence that all students have achieved the basic competencies prior to entry into the field.

Nothing in this Standard restricts programs from formulating goals beyond entry-level competence.

Each program should incorporate within its goals and objectives the expectation that graduates consistently demonstrate competence at the level for which they are prepared.   These competencies should provide the framework for structuring the program's instructional plan and for defining the objectives of its curriculum.

Programs are encouraged to consider preparing advanced level or specialized practitioners, and to address other appropriate needs identified by the communities of interest.

III. Resources

A.   Type and Amount
Program resources must be sufficient to ensure the achievement of the program's goals and outcomes. Resources must include, but are not limited to: faculty, clerical/support staff, curriculum, finances, offices, classroom/laboratory facilities, ancillary student facilities, clinical affiliations, equipment/supplies, computer resources, instructional reference materials, and faculty/staff continuing education.

Classrooms and laboratories should be able to accommodate the assigned number of students. They should be well lit and ventilated, furnished and equipped according to the standards of an accredited educational institution, and available at times commensurate with the needs of the program and its students.

Equipment and supplies should be functional and representative of current clinical practices. The quantity and quality of equipment and supplies should meet program requirements.

Learning resources should be accessible to students outside of regular classroom hours, e.g. evenings and weekends. Instructional plans should promote student utilization of these resources.

Examples of computer resources are computer-assisted instruction materials, patient care simulations, and access to internet resources.

Clinical affiliates and their laboratories should conform to professional standards of practice and standards established by nationally recognized accrediting organizations.

B.   Personnel
The sponsor must appoint sufficient faculty and staff with the necessary qualifications to perform the functions identified in documented job descriptions and to achieve the program's stated goals and outcomes.

1.   Required Position(s)
a.   Program Director
(1)   Responsibilities
The Program Director must be responsible for the continuous review, planning, development, and general effectiveness of the program and professional content.

Programs with an add-on(s) should identify an appropriately credentialed individual to oversee the curriculum and training for each add-on specialty area.

(2)   Qualifications
The Program Director must hold active verifiable certification or registration within the profession(s). The Program Director must possess at least a Bachelor's Degree with clinical and teaching experience.

The Program Director should have a minimum of 5 years clinical and/or teaching experience. The Program Director should be a person distinguished by a high degree of expertise and experience. This person should have demonstrated talents for leadership, organization, and teaching. There should be documentation that the Program Director maintains his/her clinical and technical skills and participates regularly in continuing clinical education.

b.   Medical Director
(1)   Responsibilities
The Medical Director of the program must provide the input necessary to ensure that the medical components of the curriculum, both the didactic and supervised clinical practice, meet current standards of medical practice. He/she shall promote the cooperation and support of practicing physicians.

Two qualified individuals may share the responsibilities of the Medical Director as Co-Medical Directors; however, responsibilities and qualifications should be clearly delineated.

(2)   Qualifications
The Medical Director must be a licensed physician, with recognized qualifications within the profession.

The Medical Director should be a person distinguished by a high degree of expertise and experience. This person should have demonstrated talents for leadership, organization, and teaching. The Medical Director is encouraged to hold active verifiable certification in a specialty appropriate to the profession(s). There should be documentation that the Medical Director maintains his/her clinical skills and participates in continuing medical education.

c.   Faculty and Clinical Instructional Staff
(1)   Responsibilities
In classrooms, laboratories, and all clinical facilities where a student is assigned, there must be a qualified individual(s) clearly designated as a liaison(s) to the program to provide instruction, supervision, and timely assessments of the student's progress in meeting program requirements.

(2) Qualifications
   Instructors must be appropriately credentialed, knowledgeable in subject matter by virtue of training and experience, and effective in teaching assigned subjects.

C. Curriculum
   The curriculum must ensure the achievement of program goals and learning domains. Instruction must be an appropriate sequence of classroom, laboratory, and clinical activities. Instruction must be based on clearly written course syllabi that include course description, course objectives, methods of evaluation, topic outline, and competencies required for graduation. The curriculum must include competencies in emergency preparedness consistent with the profession.

1. CoA-NDT Approved Curriculum
   The program must demonstrate by comparison that the curriculum offered meets or exceeds the content requirements of the latest edition of the CoA-NDT graduate competencies (see companion document).

   If there is more than one curriculum design, the program should demonstrate that graduates of all program designs are equally competent. An example of multiple program design is the addition of distance learning to traditional instructional methods.

   In addition to the approved NDT curriculum, the following general education courses are strongly encouraged: mathematics; written and oral communication; social/behavioral sciences; computer science; and critical thinking skills.

2. Physician Interaction
   Physician interaction and input must be available for instruction of students to enable achievement of the program's goals and outcomes.

   The purpose of the instructional interaction and input is both to convey information and perspective, and to develop effective communication skills between physicians and students.

D. Resource Assessment
   The program must, at least annually, assess the appropriateness and effectiveness of the resources described in these **Standards**. The results of resource assessment must be the basis for ongoing planning and appropriate change. An action plan must be developed when deficiencies are identified in the program resources. Implementation of the action plan must be documented and results measured by ongoing resource assessment.

Other dimensions of the program may merit evaluation as well, such as the admission criteria and process, the curriculum design, and the purpose and productivity of the Advisory Committee.

Records of implementation of the action plan should be maintained for the program. Records should include purpose, measurements, results, analyses, and follow-up.

IV. Student and Graduate Evaluation/Assessment

A. Student Evaluation
1. Frequency and purpose
   Evaluation of students must be conducted on a recurrent basis and with sufficient frequency to provide both the students and program faculty with valid and timely indications of the students' progress toward and achievement of the competencies and learning domains stated in the curriculum.

   The evaluation system should provide each student and the program with analysis of the student's knowledge, performance-based strengths and areas for improvement, and progress toward attainment of the competencies and objectives stated in the curriculum.

   Methods of assessment should be carefully designed and constructed to measure stated objectives at the appropriate level of difficulty. Methods used to evaluate clinical skills and behaviors should be consistent with

stated performance expectations and designed to assess competency attainment accurately and reliably in the cognitive, affective, and psychomotor domains.

The program should be able to demonstrate inter-related reliability among those individuals who perform evaluations.

In order to ensure their effectiveness, evaluation methods should undergo frequent reappraisal. The program should demonstrate appropriate updating and revision of the methods employed, or in the formulation of more effective methods.

2. Documentation
Records of student evaluations must be maintained in sufficient detail to document learning progress and achievements.

Programmatic student records should include sufficient information to document satisfactory completion of all didactic, laboratory, and clinical requirements.

Records should remain on file until after the student has successfully completed all degree plan requirements for graduation. Records maintained by the institution should be complete even if a student is not successful in completing the prescribed course of instruction.

B. Outcomes
1. Outcomes Assessment
The program must periodically assess its effectiveness in achieving its stated goals and learning domains. The results of this evaluation must be reflected in the review and timely revision of the program.

Outcomes assessments must include, but are not limited to: national credentialing examination(s) performance, programmatic retention/attrition, graduate satisfaction, employer satisfaction, job (positive) placement, and programmatic summative measures. The program must meet the outcomes assessment thresholds.

"Positive placement" means that the graduate is employed full or part-time in a related field; and/or continuing his/her education; and/or serving in the military.
Program evaluation should be a continuing systematic process in consultation with employers, faculty, clinical instructors, students and graduates, involving internal and external curriculum validation.

Competency in the cognitive (knowledge) domain should be demonstrated by the graduates' success in passing a professionally recognized national certification or registration examination.

Competency in the psychomotor (skills) domain could include successful completion of technical competencies required for employment.

Competency in the affective (behavior) domain could include maintenance of membership in a state, regional, and/or national professional organization.

One competency may evaluate more than one domain. If this is the case, the program should identify specific domains and how they are being assessed by the one competency.

2. Outcomes Reporting
The program must periodically submit to the CoA-NDT the program goal(s), learning domains, evaluation systems (including type, cut score, and appropriateness), outcomes, its analysis of the outcomes and an appropriate action plan based on the analysis.

Programs not meeting the established thresholds must begin a dialogue with the CoA-NDT to develop an appropriate plan of action to respond to the identified shortcomings.

Reports should be submitted to the CoA-NDT in accordance with the established policies and timetables.

V. Fair Practices

A. Publications and Disclosure
1. Announcements, catalogs, publications, and advertising must accurately reflect the program offered.
2. At least the following must be made known to all applicants and students: the sponsor's institutional and programmatic accreditation status as well as the name, address and phone number of the accrediting agencies; admissions policies and practices, including technical standards (when used); policies on advanced placement, transfer of credits, and credits for experiential learning; number of credits required for completion of the program; tuition/fees and other costs required to complete the program; policies and processes for withdrawal and for refunds of tuition/fees.
3. At least the following must be made known to all students: academic calendar; student grievance procedure; criteria for successful completion of each segment of the curriculum and graduation; and policies and processes by which students may perform clinical work while enrolled in the program.
4. The sponsor must maintain, and provide upon request, current and consistent information about student/graduate achievement that includes the results of one or more of the outcomes assessments required in these **Standards**.

The sponsor should develop a suitable means of communicating to the communities of interest the achievement of students/graduates.

The program should document how complaints are addressed and describe how new needs are met.

B. Lawful and Non-discriminatory Practices
All activities associated with the program, including student and faculty recruitment, student admission, and faculty employment practices, must be non-discriminatory and in accord with federal and state statutes, rules, and regulations. There must be a faculty grievance procedure made known to all paid faculty.

C. Safeguards
The health and safety of patients, students, and faculty associated with the educational activities of the students must be adequately safeguarded.

All activities required in the program must be educational and students must not be substituted for staff.

D. Student Records
Satisfactory records must be maintained for student admission, advisement, counseling, and evaluation. Grades and credits for courses must be recorded on the student transcript and permanently maintained by the sponsor in a safe and accessible location.

E. Substantive Changes
The sponsor must report substantive change(s) as described in Appendix A to CAAHEP/CoA-NDT in a timely manner. Additional substantive changes to be reported to the CoA-NDT within a reasonable period of time include:
1. curriculum, including department changes, college/hospital-wide changes, and those changes made in other departments (i.e. general education) that have an impact on the program.

F. Agreements
There must be a formal affiliation agreement or memorandum of understanding between the sponsor and all other entities that participate in the education of the students describing the relationship, roles, and responsibilities of the sponsor and that entity.

APPENDIX A

Application, Maintenance and Administration of Accreditation

A. Program and Sponsor Responsibilities

1. **Applying for Initial Accreditation**

   a. The chief executive officer or an officially designated representative of the sponsor completes a "Request for Accreditation Services" form and returns it electronically or by mail to:

   Committee on Accreditation for Education in Neurodiagnostic Technology
   6654 South Sycamore Street
   Littleton, CO 80120
   Phone: 303-738-0770
   Fax: 303-738-3223
   Email: office@CoA-NDT.org

   The "Request for Accreditation Services" form can be obtained from the CAAHEP website at www.caahep.org/Content.aspx?ID=11.

   Note: There is **no** CAAHEP fee when applying for accreditation services; however, individual committees on accreditation may have an application fee.

   b. The program undergoes a comprehensive review, which includes a written self-study report and an on-site review.

   The self-study instructions and report form are available from the Committee on Accreditation for Education in Neurodiagnostic Technology (CoA-NDT). The on-site review will be scheduled in cooperation with the program and CoA-NDT once the self-study report has been completed, submitted, and accepted by the CoA-NDT.

2. **Applying for Continuing Accreditation**

   a. Upon written notice from the CoA-NDT, the chief executive officer or an officially designated representative of the sponsor completes a "Request for Accreditation Services" form, and returns it electronically or by mail to:

   Committee on Accreditation for Education in Neurodiagnostic Technology
   6654 South Sycamore Street
   Littleton, CO 80120
   Phone: 303-738-0770
   Fax: 303-738-3223
   Email: office@CoA-NDT.org

   The "Request for Accreditation Services" form can be obtained from the CAAHEP website at www.caahep.org/Content.aspx?ID=11.

   b. The program may undergo a comprehensive review in accordance with the policies and procedures of the CoA-NDT.

   If it is determined that there were significant concerns with the conduct of the on-site review, the sponsor may request a second site visit with a different team.

   After the on-site review team submits a report of its findings, the sponsor is provided the opportunity to comment in writing and to correct factual errors prior to the CoA-NDT forwarding a recommendation to CAAHEP.

3. **Administrative Requirements for Maintaining Accreditation**

   a. The program must inform the CoA-NDT and CAAHEP within a reasonable period of time (as defined by the committee on accreditation and CAAHEP policies) of changes in chief executive officer, dean of health professions or equivalent position, and required program personnel (Refer to Standard III.B.).

   b. The sponsor must inform CAAHEP and the CoA-NDT of its intent to transfer program sponsorship. To begin the process for a Transfer of Sponsorship, the current sponsor must submit a letter (signed by the CEO or designated individual) to CAAHEP and the CoA-NDT that it is relinquishing its sponsorship of the program. Additionally, the new sponsor must submit a "Request for Transfer of Sponsorship Services" form. The CoA-NDT has the discretion of requesting a new self-study report with or without an on-site review. Applying for a transfer of sponsorship does not guarantee that the transfer of accreditation will be granted.

   c. The sponsor must promptly inform CAAHEP and the CoA-NDT of any adverse decision affecting its accreditation by recognized institutional accrediting agencies and/or state agencies (or their equivalent).

   d. Comprehensive reviews are scheduled by the CoA-NDT in accordance with its policies and procedures. The time between comprehensive reviews is determined by the CoA-NDT and based on the program's on-going compliance with the Standards, however, all programs must undergo a comprehensive review at least once every ten years.

   e. The program and the sponsor must pay CoA-NDT and CAAHEP fees within a reasonable period of time, as determined by the CoA-NDT and CAAHEP respectively.

   f. The sponsor must file all reports in a timely manner (self-study report, progress reports, probation reports, annual reports, etc.) in accordance with CoA-NDT policy.

   g. The sponsor must agree to a reasonable on-site review date that provides sufficient time for CAAHEP to act on a CoA-NDT accreditation recommendation prior to the "next comprehensive review" period, which was designated by CAAHEP at the time of its last accreditation action, or a reasonable date otherwise designated by the CoA-NDT.

Failure to meet any of the aforementioned administrative requirements may lead to administrative probation and ultimately to the withdrawal of accreditation. CAAHEP will immediately rescind administrative probation once all administrative deficiencies have been rectified.

4. **Voluntary Withdrawal of a CAAHEP- Accredited Program**

   Notification of voluntary withdrawal of accreditation from CAAHEP must be made by the Chief Executive Officer or an officially designated representative of the sponsor by writing to CAAHEP indicating: the desired effective date of the voluntary withdrawal, and the location where all records will be kept for students who have completed the program.

5. **Requesting Inactive Status of a CAAHEP- Accredited Program**

   Inactive status for any accredited program other than one holding Initial Accreditation may be requested from CAAHEP at any time by the Chief Executive Officer or an officially designated representative of the sponsor writing to CAAHEP indicating the desired date to become inactive. No students can be enrolled or matriculated in the program at any time during the time period in which the program is on inactive status. The maximum period for inactive status is two years. The sponsor must continue to pay all required fees to the CoA-NDT and CAAHEP to maintain its accreditation status.

To reactivate the program the Chief Executive Officer or an officially designated representative of the sponsor must provide notice of its intent to do so in writing to both CAAHEP and the CoA-NDT. The sponsor will be notified by the CoA-NDT of additional requirements, if any, that must be met to restore active status.

If the sponsor has not notified CAAHEP of its intent to re-activate a program by the end of the two-year period, CAAHEP will consider this a "Voluntary Withdrawal of Accreditation."

B. CAAHEP and Committee on Accreditation Responsibilities – Accreditation Recommendation Process

1. After a program has had the opportunity to comment in writing and to correct factual errors on the on-site review report, the CoA-NDT forwards a recommendation to the CAAHEP Board of Directors. The recommendation may be for initial accreditation, continuing accreditation, or probationary accreditation, or to withhold or withdraw accreditation.

    The decision of the CAAHEP Board of Directors is provided in writing to the sponsor immediately following the CAAHEP meeting at which the program was reviewed and voted upon.

2. Before the CoA-NDT allows the Initial Accreditation of a program to expire, the sponsor must have the opportunity to request reconsideration of that decision or to request voluntary withdrawal of accreditation. The CoA-NDT decision is final and CAAHEP will not entertain any appeal on behalf of the program. CAAHEP will notify the sponsor in writing of the CoA-NDT decision.

3. Before the CoA-NDT forwards a recommendation to CAAHEP that a program be placed on probationary accreditation, the sponsor must have the opportunity to request reconsideration of that recommendation or to request voluntary withdrawal of accreditation. The CoA-NDT reconsideration of a recommendation for probationary accreditation must be based on conditions existing both when the committee arrived at its recommendation as well as on subsequent documented evidence of corrected deficiencies provided by the sponsor.

    The CAAHEP Board of Directors' decision to confer probationary accreditation is not subject to appeal.

4. Before the CoA-NDT forwards a recommendation to CAAHEP that a program's accreditation be withdrawn or that accreditation be withheld, the sponsor must have the opportunity to request reconsideration of the recommendation, or to request voluntary withdrawal of accreditation or withdrawal of the accreditation application, whichever is applicable. The CoA-NDT reconsideration of a recommendation of withdraw or withhold accreditation must be based on conditions existing both when the CoA-NDT arrived at its recommendation as well as on subsequent documented evidence of corrected deficiencies provided by the sponsor.

    The CAAHEP Board of Directors' decision to withdraw or withhold accreditation may be appealed. A copy of the CAAHEP "Appeal of Adverse Accreditation Actions" is enclosed with the CAAHEP letter notifying the sponsor of either of these actions.

    At the completion of due process, when accreditation is withheld or withdrawn, the sponsor's Chief Executive Officer is provided with a statement of each deficiency. Programs are eligible to re-apply for accreditation once the sponsor believes that the program is in compliance with the accreditation Standards.

Note: Any student who completes a program that was accredited by CAAHEP at any time during his/her matriculation is deemed by CAAHEP to be a graduate of a CAAHEP-accredited program.