Directions For Using and Submitting The Electronic Self-Study

Welcome to the NAACLS Electronic Self Study!

What is the Electronic Self-Study?

The Electronic Self-Study is essentially the same as NAACLS's regular Self-Study with one major exception. Rather than organizations submitting a binder filled with paper documents, the Electronic Self-Study and its supporting documentation is submitted on a flash drive.

What are the benefits of completing the Self-Study electronically?

There are many benefits to many different stakeholders - Peer Reviewers, Organizations, and NAACLS staff. Some of these benefits include:

- Organizations save a significant amount of money on paper, copying, and shipping.
- Organizations save time preparing the Self-Study document because they only need to produce one document which contains the narratives as well as being able to embed the supporting documentation in the same document.
- Peers no longer have to lift heavy boxes or carry around big binders.
- Peers have the convenience of being able to review an entire Self-Study any place they can bring a laptop computer.
- NAACLS saves money on shipping Self-Studies to paper and site reviewers.
- Self-Studies can more easily be archived.

Can our program submit part of our Self-Study electronically and part of it in hard copy format?

- Yes, however programs are encouraged to submit as much of the supporting documentation electronically.

Do I need any special software?

- No. All you will need is Adobe Acrobat Reader.

Do I need the full version of Adobe Acrobat? Can I just use the free version of the Reader located on Adobe's website?

- While Acrobat is recommended if you have it, the free Acrobat Reader (www.adobe.com) is all that is needed. These directions are tailored for the newest version, Adobe Reader XI.

Do I need to purchase a scanner and scanning software? Can I have a copy center scan my hard copy documents?

- While the organization may not need to purchase a scanner and scanning software, it will need to find a method for saving hard copy documents in an appropriate electronic format for the Self-Study. Using a scanner and scanning software would allow the organization to do this. However, an organization may choose to bring their hard copy documents to a copy center for scanning. Many programs allow for direct printing or conversion to a PDF. A number of free PDF converters are available on-line. Two examples include PrimoPDF (http://www.primopdf.com/primopdf_free_idx.htm) and PDF reDirect (http://www.exp-systems.com/index.htm).

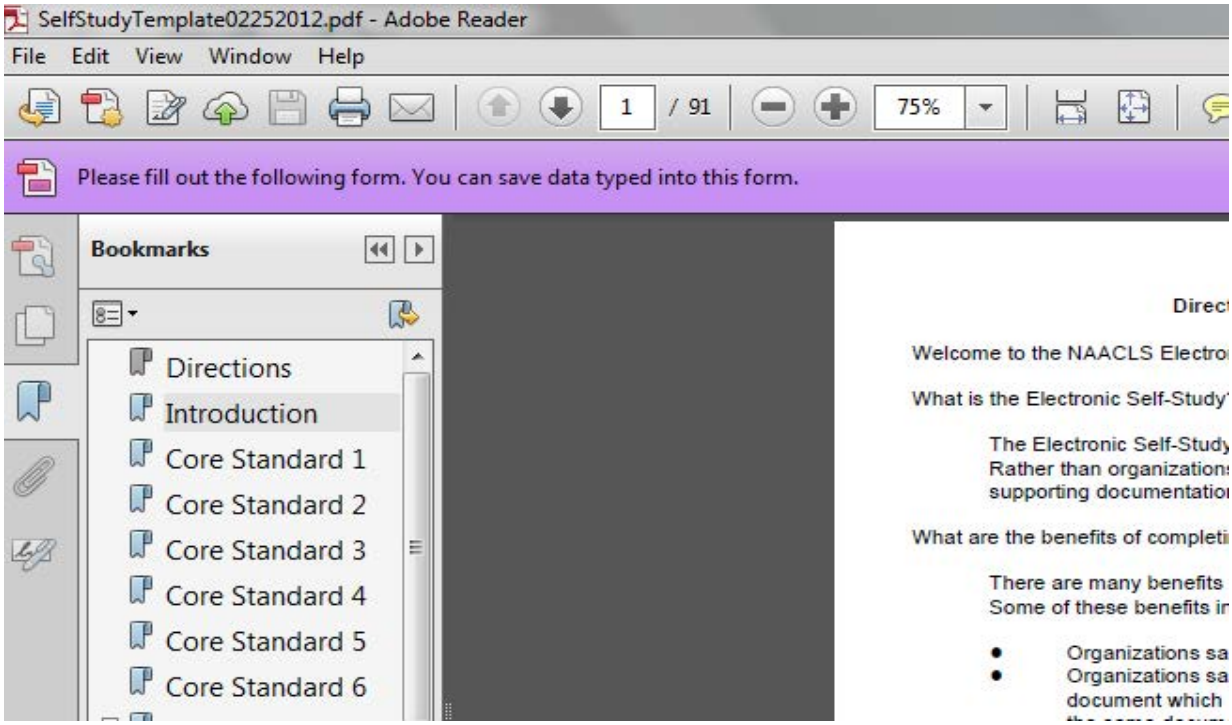
Where can I download blank copies of fact sheets to fill out and attach to the Electronic Self-Study?

- http://naacls.org/search/docs.asp

The following pages are instructions for using the Electronic Self-Study. We hope that you find preparing and submitting your self-study electronically an enjoyable process.

A. Viewing Bookmarks and Navigating the Self-Study Document:

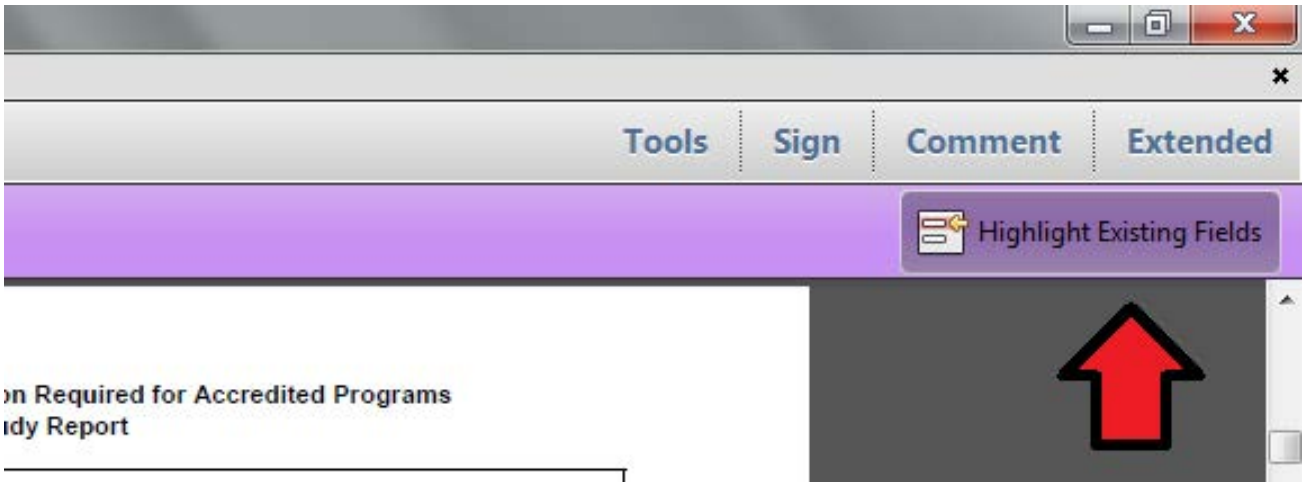
Bookmarks act as a table of contents for PDFs. All of the Standards have been bookmarked.
To view bookmarks in a PDF document, make sure the Bookmark panel is activated.



You can navigate to the various standards by selecting one of the bookmarks from the bookmark pane.

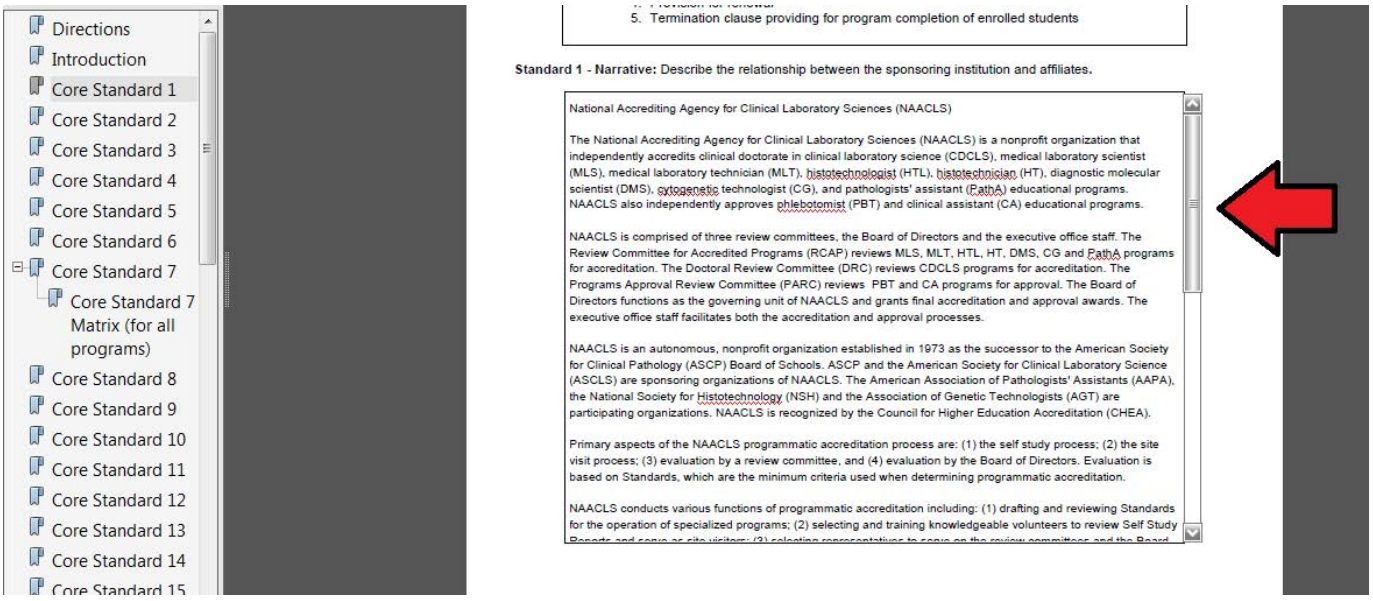
B. Entering Text Into the Form Fields (light blue areas):

The Electronic Self-Study allows for the user to type in designated areas or fields. The areas which allow for user input will be highlighted a light blue. To turn on and off the "Highlight Existing Fields" option, simply click the button.



What if I have more text than will fit in the text field box?

The text boxes are expandable, so you can continue to add text to the box even if it appears that you are at the end of the page. The box is scrollable - similar to a Web page.



C. Adding Attachments and Documents to the Self-Study Document:

You can add files as attachments to the Self-Study. You can use the “Attach A File As A Comment” tool to embed a file at a selected location in a PDF. This allows for the reader to easily access various documents associated with the standard and the reader can open it for viewing.

The files become embedded in the Self-Study. The files are then saved along with the Self-Study when you save the Self-Study. If you move the PDF to a new location, all of the embedded files automatically go with it.

Files of any format (PDF, Microsoft WORD, WordPerfect, JPG, etc.) can be attached and saved in the self study. Although any file format may be attached, the individual wishing to view the attached file must have an application installed that can open the attachment. Submitting the document as a PDF assures that the reader can view the document. Many programs allow for direct printing or conversion to a PDF. A number of free PDF converters are available on-line (e.g. PrimoPDF [http://www.primopdf.com/primopdf_free_idx.htm] and PDF reDirect [http://www.exp-systems.com/index.htm])

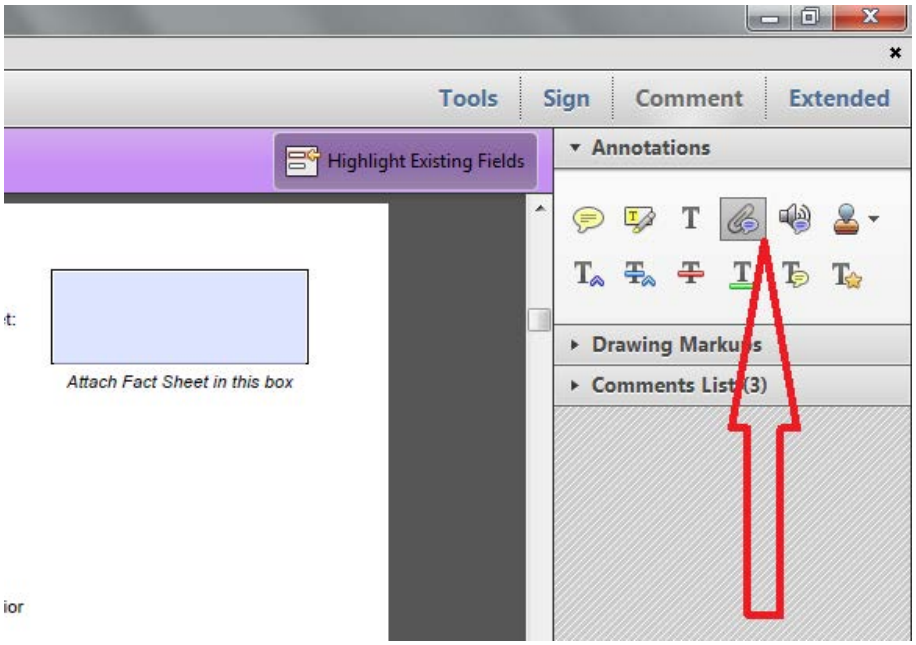
For those standards that require documentation, fields have been defined for you to attach the files.

To Attach a File:

1. On the upper right side, click on Comment > Annotations > Attach File.

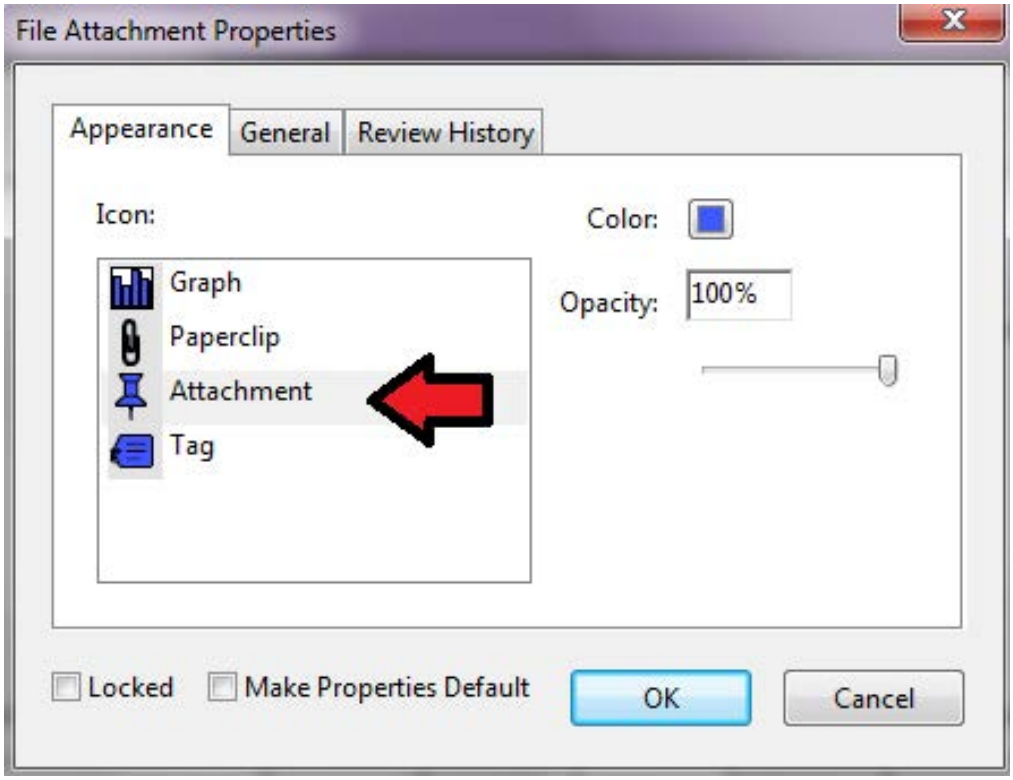
2. Your cursor will turn into a "pushpin", then click in the PDF where you want to place the attachment.

Boxes, which will also be highlighted in blue, have been placed in the document for placement of the attachments where documentation is required.



3. Select the file that you want to attach, and then click SELECT.

In the File Attachment Properties dialog box, select the “Push Pin” (attachment) icon and click "OK".



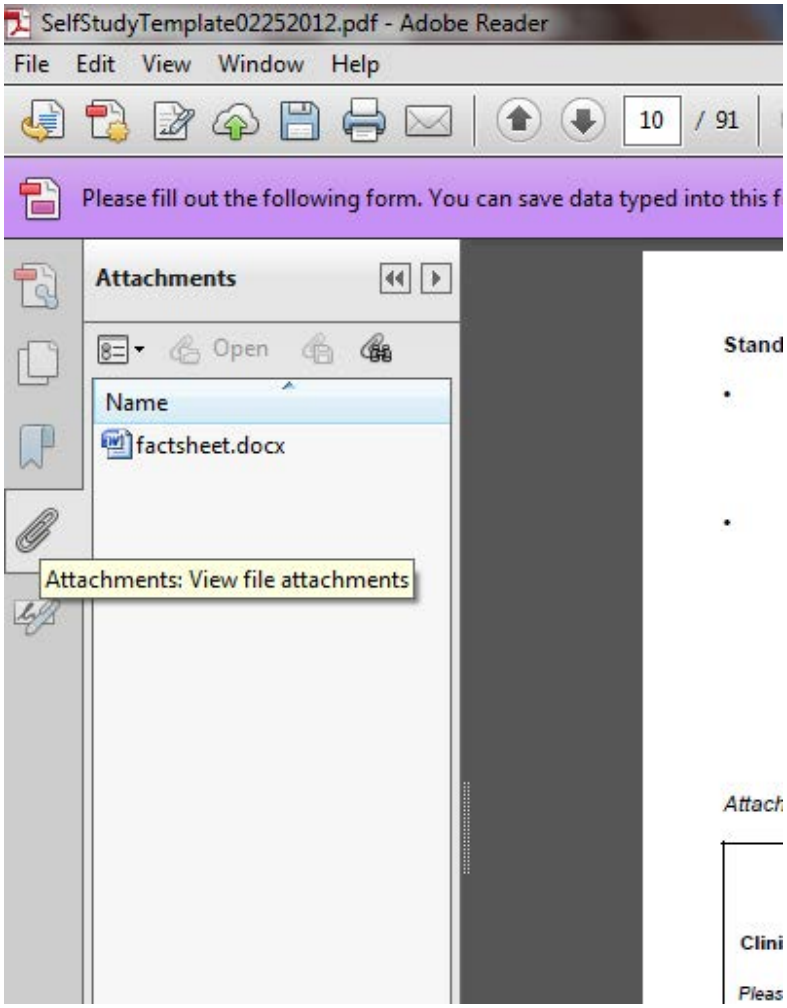
Note: To delete the attachment, right-click the attached comment icon, and choose Delete.

When you save your self study all of the attached files are saved along with the self study in a single file.

D. Reviewing and Viewing All Attachments Contained in the Self-Study:

All of the attachments contained and their location in the PDF document may be viewed from the “Attachment” tab.

To view the attachments go to the left hand toolbar in Acrobat Reader and select the “Attachment” icon, underneath the "Bookmarks" icon.



NAACLS Electronic Self-Study Template

Version 1.6, created May 31, 2013

Name of Program: _____

Location (City,ST): _____

Type of Program: _____

Self-Study Due Date: _____

Introduction: Please give a brief description of your program and how it is organized

Core Standards and Documentation Required for Accredited Programs
Self Study Report

Standard 1: Institutional Affiliation

The sponsoring institution (or at least one participating entity in the case of a consortium or joint venture) and affiliates, clinical and/or academic, if any, must be accredited by recognized regional and/or national agencies.

In programs in which the education is provided by two or more institutions, responsibilities of the sponsor and of each affiliate for program administration, instruction, and supervision must be described in writing and signed by both parties. All provisions of the agreement must be active with written documentation of the following items:

A. General

1. Reason for the agreement
2. Responsibilities of the academic facility
3. Responsibilities of the clinical facility
4. Joint responsibilities

B. Specific

1. Supervisory responsibilities for the students
2. Student professional liability coverage
3. Student health and safety policies
4. Provision for renewal
5. Termination clause providing for program completion of enrolled students

Standard 1 - Narrative: Describe the relationship between the sponsoring institution and affiliates**.**

Standard 1- Documentation:

- Submit a completed copy of the Sponsoring Institution Program Fact Sheet:

Attach Fact Sheet in this box

- Information to submit for each affiliate (if applicable):
  - Clinical Facility Fact Sheet
  - Signed, current Affiliation Agreement
  - Capital (major) equipment utilized for student instruction
  - Facility specific required textbooks
  - Access to periodicals
  - Instructional resources
  - Objectives and evaluations utilized exclusively by the facility
  - Rules and policies unique to the facility that govern student behavior

Attach appropriate documents in boxes below (Notify NAACLS if you have more affiliates than the spaces below provide)

Clinical (C)/Academic (A) Affiliate: *Please indicate (C) or (A) after name of affiliate*	**Clinical Facility Fact Sheet**	**Signed Current Affiliation Agreement**	**Capital Equipment**	**Facility Specific Required Textbooks and Periodical Access**	**Instr. Resources**	**Site Specific Obj's and Eval's:**	**Unique Rules and Policies:**

Clinical (C)/Academic (A) Affiliate: *Please indicate (C) or (A) after name of affiliate*	**Clinical Facility Fact Sheet**	**Signed Current Affiliation Agreement**	**Capital Equipment**	**Facility Specific Required Textbooks and Periodical Access**	**Instr. Resources**	**Site Specific Obj's and Eval's:**	**Unique Rules and Policies:**

Clinical (C)/Academic (A) Affiliate: *Please indicate (C) or (A) after name of affiliate*	**Clinical Facility Fact Sheet**	**Signed Current Affiliation Agreement**	**Capital Equipment**	**Facility Specific Required Textbooks and Periodical Access**	**Instr. Resources**	**Site Specific Obj's and Eval's:**	**Unique Rules and Policies:**

Core Standards and Documentation Required for Accredited Programs
Self Study Report

Standard 2: Sponsorship

Educational programs must be sponsored by:

A. colleges and universities;

B. hospitals and medical centers;

C. medical laboratories,

D. consortia or joint ventures, consisting of two or more participating entities and formed by agreement to undertake a common enterprise as a sponsoring entity, whereby at least one member of the consortium or joint venture must meet the requirements of Standard 1, or;

E. other institutions which meet comparable standards for education in clinical laboratory science.

Indicate the type of sponsoring institution:

Standard 2 - Narrative: No narrative required.

Standard 2 - Documentation: No documentation required.

Standard 3: Responsibilities of the Sponsor

Accreditation is granted to the sponsor (and participating entities, in cases of consortia) that assumes primary responsibility for curriculum planning and selection of course content; coordinates classroom teaching and applied education, appoints faculty to the program, receives and processes applications for admission, and assures that graduates of the program have obtained the appropriate degrees/certificates upon completion of the program, as detailed in Standard 14G:

A. The sponsor (and participating entities, in cases of consortia) must be responsible for providing assurance that the activities assigned to students in the clinical setting are educational.

B. There must be documented ongoing communication between the sponsor (and participating entities, in cases of consortia) and its affiliates for exchange of information and coordination of the program.

Standard 3 - Narrative: Describe the responsibilities assumed by the sponsor.

Standard 3 - Documentation: Submit a copy of the certificate issued upon graduation or completion of the program, or the appropriate page from the college catalog indicating that the institution grants a degree.

Attach appropriate documentation in box above

Standard 3A - Narrative: Describe how the sponsor assures that assigned activities in the clinical setting are educational.

Standard 3A - Documentation: No documentation required.

Standard 3B - Narrative: Describe how the program communicates with affiliates for exchange of information and coordination.

Standard 3B - Documentation: Submit documentation of ongoing communication between representatives of the sponsor and an affiliate.

Attach appropriate documentation in box above

Core Standards and Documentation Required for Accredited Programs
Self Study Report

Standard 4: General Resources

Resources must support the number of students admitted into the program. The instructor to student ratio must be adequate to achieve the stated program goals.

Standard 4 - Narrative: Describe how personnel resources (e.g., instructors, staff) support the number of students admitted.

Standard 4 - Documentation: Indicate: 1. The number of students admitted per year; 2. Admission date(s); and 3. Instructor to student ratios for lecture, student laboratory (if applicable) and clinical laboratory (if applicable).

Attach appropriate documentation in box above

Standard 5: Financial Resources

Financial resources for continued operation of the educational program must be ensured by an adequate, institutionally approved budget or by a statement of continued financial support from an executive officer of the sponsor (or one from each participating entity, in cases of consortia).

Standard 5 - Narrative: Describe how the financial resources are adequate to assure the continued operation of the program.

Standard 5 - Documentation: Submit an institutionally approved budget **OR** a written statement of continued financial support for the educational program from an executive officer of the sponsor (or one from each participating entity, in cases of consortia).

Attach appropriate documentation in box above

Standard 6A: Physical Resources - Facilities

Classrooms, laboratories, administrative offices and other facilities must be adequate, equipped for safety, and must be in compliance with pertinent governmental laws.

Standard 6A - Narrative: Describe the program's academic and clinical facilities (e.g., classrooms, laboratories, administrative offices) and safety features.

Standard 6A - Documentation: No documentation required.

Core Standards and Documentation Required for Accredited Programs
Self Study Report

Standard 6B: Physical Resources - Equipment and Supplies

Each student must have reasonable access to and experience with modern equipment and supplies.

Standard 6B - Narrative: No Narrative Required

Standard 6B - Documentation: List the capital (major) equipment and supplies utilized in student instruction.

Attach appropriate documentation in box above

Core Standards and Documentation Required for Accredited Programs
Self Study Report

Standard 6C: Physical Resources - Information Resources

Each student must have reasonable access to information resources containing current editions of books, periodicals and other reference materials in contemporary formats related to all content areas of the curriculum.

Standard 6C - Narrative: Describe the accessibility of information resources to students.

Standard 6C - Documentation: Submit a list of required textbooks (list the author, title, publisher and, publication date for each).

Attach appropriate documentation in box above

Standard 6D: Physical Resources - Instructional Resources

Adequate instructional resources must be available to facilitate each student's attainment of entry level competencies.

Standard 6D - Narrative: Describe the resources, including clinical, reference and demonstration materials (e.g., practice specimens, stock cultures, case studies) used in instruction for each laboratory discipline.

Standard 6D - Documentation: No Documentation Required

Standard 6E: Physical Resources - Computer Technology

Each student must have access to and experience with contemporary computer technology.

Standard 6E - Narrative: Describe how access to contemporary computer technology is provided to students.

Standard 6E - Documentation: No Documentation Required

Core Standards and Documentation Required for Accredited Programs
Self Study Report

Standard 7: Program Description/Publications

Students must be provided with a clear description of the program and its content and current publications, which must include:

A. program mission statement;
B. program goals and competencies;
C. course objectives;
D. applied education assignments (if applicable);
E. admission criteria, both academic and non-academic;
F. a list of course descriptions;
G. names and academic rank or title of the program director and faculty (and medical director/medical advisor for PathA programs)
H. tuition and fees with refund policies;
I. causes for dismissal;
J. rules and regulations;
K. a listing of clinical facilities (if applicable);
L. essential functions;
M. policies and procedures when applied experience cannot be guaranteed, and
N. outcomes measures.

Standard 7 - Narrative: Identify the specific publication(s) in which items in Standard 7 A-N are included.

Standard 7 - Documentation: Submit current publications (e.g., program brochures, student handbooks, policy manuals, catalogs, websites, and/or syllabi) that address the items listed in Standard 7 A-M.

A matrix is provided to assist you in identifying the publication(s) that address the items listed in Standard 7 A-M. *Use of the matrix is optional. *For any documents not attached in the matrix please attach in the box below.*

Standard 7 Matrix (All Programs)				
	Publications			
	Catalog	**Student Handbook**	**Application Form**	**Website**
Program mission statement				
Program goals and competencies				
Course objectives				
Applied education assignments (if applicable)				
Admission criteria, both academic and non-academic				
A list of course descriptions				
Names and academic rank or title of the program director and faculty				
Tuition and fees with refund policies				
Causes for dismissal				
Rules and regulations				
Listing of clinical facilities (if applicable)				
Essentials functions				
Policies and procedures when applied experience cannot be guaranteed				
Outcomes Measures				

Core Standards and Documentation Required for Accredited Programs
Self Study Report

Standard 8: Admissions

Admission of students, including advanced placement if available, must be made in accordance with the clearly defined and published practices of the institution. Specific academic standards and essential functions required for admission to the program must be clearly defined, published and provided to prospective students and made available to the public.

Standard 8 - Narrative: Describe how academic standards and essential functions required for admission to the program are provided to prospective students and made available to the public.

Describe how admission to the program is made in accordance with clearly defined and published practices of the institution.

Standard 8 - Documentation: Submit published admissions policies and procedures for both the institution and the program.

(*Attach appropriate documentation in boxes)*

Submit a sample student signature page indicating awareness of the essential functions and policies for progression in and completion of the program.

Standard 9: Acceptable Conduct

Rules and regulations governing acceptable personal and academic conduct must be defined and provided to all students upon entering the program.

Standard 9 - Narrative: Describe rules and regulations governing acceptable conduct for both the academic and clinical setting. Indicate how they are distributed

Standard 9 - Documentation: Submit policies governing acceptable conduct for all academic and clinical settings

Attach appropriate documentation in box above

Standard 10: Student Records

Student records must be maintained for admission, evaluation, and counseling or advising sessions. Individual grades and credits for courses must be recorded and permanently maintained by the sponsoring institution. The program must maintain the student records, conforming to any governmental regulations and the regulations of any other accrediting agencies.

Standard 10 - Narrative: Describe how the sponsoring institution maintains records for graduates and enrolled students.

Standard 10 - Documentation: Submit policies and procedures regarding the retention of records for graduates and enrolled students.

Attach appropriate documentation in box above

Core Standards and Documentation Required for Accredited Programs
Self Study Report

Standard 11: Health and Safety

There must be a procedure for determining that each applicant's or student's health will permit the individual to meet the written essential functions of the program. Students must be informed of and have access to the usual student health care services of the institution. The health and safety of students, faculty, and patients associated with educational activities must be safeguarded. Emergency medical care must be available for students while in attendance.

Standard 11 - Narrative:

Describe how students are informed of and have access to the usual student health care services of the institution.

Describe how the health and safety of students, faculty and patients associated with educational activities are safeguarded.

Describe how emergency medical care is made available to students while they are in attendance.

Standard 11 - Documentation: No Documentation Required

Standard 12: Guidance

Guidance must be available to assist students in understanding and observing program policies and practices, for advising on professional and career issues, and for providing counseling or referral for personal and financial problems that may interfere with progress in the program. Confidentiality and impartiality must be maintained in dealing with student problems.

Standard 12 - Narrative: Describe the guidance available to assist students. Describe how confidentiality and impartiality are maintained in dealing with student problems.

Standard 12 - Documentation: No Documentation Required

Standard 13: Appeal Procedures

Appeal procedures must be distributed to students upon entering the program. They must include provisions for academic and non-academic types of grievances and a mechanism for neutral evaluation that ensures due process and fair disposition.

Standard 13 - Narrative: Describe when appeals procedures are distributed.

Standard 13 - Documentation: Submit appeals procedures and due process policies.

Attach appropriate documentation in box above

Core Standards and Documentation Required for Accredited Programs
Self Study Report

Standard 14: Fair Practices

A. Programmatic announcements must accurately reflect the program offered and include NAACLS' name, address and phone number.

B. Student recruitment and admission must be non-discriminatory in accordance with existing governmental regulations and the regulations of any other accrediting agencies applicable to the institution.

C. Faculty recruitment and employment practices must be non-discriminatory in accordance with existing governmental regulations and the regulations of any other accrediting agencies applicable to the institution.

Standard 14 A - Narrative: No Narrative Required

Standard 14A - Documentation: Submit programmatic announcements for the program offered that include NAACLS' name, address, and phone number. *(Programmatic announcements may include catalogs, websites, handbooks.*)

Standard 14B - Narrative: No Narrative Required

Standard 14B - Documentation: Submit non-discrimination statement regarding student recruitment and admission.

Standard 14C - Narrative: No Narrative Required

Standard 14C - Documentation: Submit non-discrimination statement regarding faculty recruitment and employment practices.

Attach all appropriate documentation in boxes above

Standard 14: Fair Practices

D. Academic credits and costs to the student must be accurately stated, published, and made known to all applicants.

Standard 14D - Narrative: Describe how academic credits and costs are published and made known to all applicants.

Standard 14D - Documentation: Submit admissions publications that address academic credits and cost.

Attach appropriate documentation in box above

Standard 14: Fair Practices

E. Policies and procedures for student withdrawal and refunds of tuition and fees must be published and made known to all applicants.

Standard 14E - Narrative: Describe how policies and procedures for student withdrawal and refunds of tuition and fees are published and made known to all applicants.

Standard 14E - Documentation: Submit policies and procedures for student withdrawal and refunds of tuition and fees.

Attach appropriate documentation in box above

Standard 14: Fair Practices

F. If the sponsor offers more than one clinical laboratory science program, the sponsor must demonstrate that each program is being conducted to assure appropriate instruction for the students at the different educational levels.

Standard 14F - Narrative: **If** more than one level of clinical laboratory science program is offered, **THEN** describe how each program is being conducted to assure appropriate instruction for students at different educational levels.

Standard 14F - Documentation: No Documentation Required

Standard 14: Fair Practices

G. The program must culminate in

- (For CLS/MT, DMS, HTL, CG, or Path. Asst., programs) at least a baccalaureate degree or higher, or in a certificate for the student who otherwise completes the required degree.
- (For CLT/MLT programs) an associate degree, or in a certificate for the student who otherwise completes the required degree.
- (For HT programs) in a certificate or an associate degree, as appropriate.

The granting of the degree or certificate must not be contingent upon the student's passing any type of external certification or licensure examination. Academic standards for the program must be acceptable to the institution that grants the degree.

Standard 14G - Narrative: Indicate whether the program culminates in a degree or a certificate for the student who otherwise completes the required degree.

Standard 14G - Documentation: Submit a policy statement indicating that the issuing of the degree or certificate IS NOT contingent upon the students passing any type of external certification or licensure examination.

Attach appropriate documentation in box above

Standard 14: Fair Practices

H. A written record of formal student complaints and resolution must be maintained.

Standard 14H - Narrative: Describe the process in which student complaints are handled.

Standard 14H - Documentation: Submit a policy statement related to student complaints and resolution.

Attach appropriate documentation in box above

Core Standards and Documentation Required for Accredited Programs
Self Study Report

Standard 14: Fair Practices

I. Program evaluation information, including graduation, placement and any certification pass rates must be made available to NAACLS upon request.

Standard 14I - Narrative: Describe the availability of the program evaluation information.

Standard 14I - Documentation: No Documentation Required

Core Standards and Documentation Required for Accredited Programs
Self Study Report

Standard 15: Systematic Review

There must be a mechanism for continually and systematically reviewing the effectiveness of the program to include survey and evaluation instruments that incorporate feedback from a combination of students, employers, faculty, graduates, exit or final examinations, and accreditation review.

Standard 15 - Narrative: Describe the formal evaluation plan for continually and systematically reviewing the effectiveness of the program.

Standard 15 - Documentation:

Submit: source and frequency of feedback especially from the following: students, graduates, employers of graduates, faculty, advisory groups, exit or final examinations, and clinical affiliates.

Submit: survey / feedback / evaluation forms

Attach all appropriate documentation in boxes above

Standard 16: Outcome Measures

A review of outcomes measures (e.g. external certifying examination results, results from capstone projects) from the last three active years must be documented, analyzed and used in the program evaluation.

Standard 16 - Narrative: Describe how outcome measures (e.g., the performance of graduates on external certifying examinations or capstone projects) from the last three active years are considered in the program evaluation.

Standard 16 - Documentation: Submit the outcome measures for the last three active years and the number of graduates from the program. (For performance on certification exams, list the number taking the certifying examination, the pass rates (percentages) and the program and national mean scores.)

Attach appropriate documentation in box above

Core Standards and Documentation Required for Accredited Programs
Self Study Report

Standard 17: Graduation and Placement Rates

A review of graduation rates and placement rates must be documented, analyzed and used in the program evaluation.

Standard 17 - Narrative: Describe how the reviews of graduation and placement rates are documented, analyzed and used in the program evaluation.

Standard 17 - Documentation:

Submit the reviews of graduation and placement rates.

Submit documentation of analysis showing how results are used in program evaluation.

Attach all appropriate documentation in boxes

Core Standards and Documentation Required for Accredited Programs
Self Study Report

Standard 18: Program Evaluation and Modification

The results of program evaluations must be documented and reflected in ongoing curriculum development and program modification, followed by an analysis of the effectiveness of any changes implemented.

Standard 18 - Narrative: Describe how the results of program evaluation are reflected in the curriculum and other elements of the program.

Standard 18 - Documentation: Submit an example of significant change resulting from program evaluation. Include the analysis of the effectiveness of that change.

Attach appropriate documentation in box above

Standard 19: No Narrative or Documentation needed for Self-Study

Unique Standards and Documentation Required for Accredited Programs:
Self Study Report

Standard 20: Program Administration

For CLS/MT

A. Program Director

1. The program must have a qualified program director.

2. Responsibilities: The program director must be responsible for the organization, administration, periodic review, planning, development, evaluation and general effectiveness of the program. The program director must have input into budget preparation and must be responsible for maintaining NAACLS approval of the program.

3. Qualifications: The program director must be a clinical laboratory scientist/medical technologist who holds nationally recognized generalist certification and who has a master's or doctoral degree and three years of experience in clinical laboratory science education that includes teaching courses, conducting and managing learning experiences, evaluating student achievement, providing input into curriculum development, policy and procedure formulation, and evaluation of program effectiveness. The program director must have a knowledge of education methods and administration as well as current accreditation and certification procedures.

4. Faculty Appointments: The program director must have a faculty appointment at the sponsoring institution or must have a faculty appointment in each affiliated academic institution. In the case of a clinically based program, the program director's appointment at affiliated academic institutions may be a regular one, a non-salaried clinical or courtesy appointment, or an adjunct appointment, depending upon the regulations of the academic institution.

B. Advisory Committee

1. There must be an advisory committee composed of individual(s) from the community of interest (i.e. pathologists, other physicians, scientific consultants, academic professionals, administrators, practicing clinical laboratory scientists/medical technologists, practicing clinical laboratory technicians/medical laboratory technicians and other professionals) who have knowledge of clinical laboratory science education.

2. Responsibilities: The advisory committee of the program shall have input into any aspect of the program/curriculum with regard to its current relevancy and effectiveness.

For CLT/MLT

A. Program Director

1. The program must have a qualified program director.

2. Responsibilities

The program director must be responsible for the organization, administration, periodic review, planning, development, evaluation and general effectiveness of the program. The program director must have input into budget preparation and must be responsible for maintaining NAACLS approval of the program.

For CLT/MLT (continued)

3. Qualifications

   The program director must be a clinical laboratory scientist/medical technologist who holds nationally recognized generalist certification and who has a master's or doctoral degree and three years of experience in clinical laboratory science education that includes teaching courses, conducting and managing learning experiences, evaluating student achievement, providing input into curriculum development, policy and procedure formulation, and evaluation of program effectiveness. The program director must have a knowledge of education methods and administration as well as current accreditation and certification procedures.

4. Faculty Appointments

   The program director must have a faculty appointment at the sponsoring institution or must have faculty appointments in each affiliated academic institution. In the case of a clinically based program, the program director's appointment at affiliated academic institutions may be a regular one, a non-salaried clinical or courtesy appointment, or an adjunct appointment, depending upon the regulations of the academic institution.

B. Advisory Committee

1. There must be an advisory committee composed of individual(s) from the community of interest (i.e. pathologists, other physicians, scientific consultants, academic professionals, administrators, practicing clinical laboratory scientists/medical technologists, practicing clinical laboratory technicians/medical laboratory technicians and other professionals) who have knowledge of clinical laboratory science education.

2. Responsibilities

   The advisory committee of the program shall have input into any aspect of the program/curriculum with regard to its current relevancy and effectiveness.

For CG

A. Program Director

1. The program must have a qualified program director.

2. Responsibilities

The program director must be responsible for the organization, administration, periodic review, planning, development, evaluation and general effectiveness of the program. The program director must have input into budget preparation and must be responsible for maintaining NAACLS accreditation of the program.

For CG (continued)

3. Qualifications

The program director must maintain current certification or licensure in cytogenetic technology, medical genetics, or another human genetics area. The program director must have a minimum of a master's degree and at least three years of experience in education that includes teaching courses, conducting and managing laboratory sciences learning experiences, evaluating student achievement, providing input into curriculum development, policy/procedure formulation and evaluation of program effectiveness. The Program Director must be a cytogeneticist, medical geneticist, or other human geneticist with three years of clinical cytogenetic experience. The program director must have knowledge of education and administration as well as current accreditation, certification and licensure procedures. The program director, if applicable, must demonstrate relevant continuing education hours (3.6 CEUs or 36 hours) within the previous three years.

4. Faculty Appointments

The program director must have a faculty appointment at the sponsoring institution or must have a faculty appointment in each affiliated academic institution. In the case of a clinically based program, the program director's appointment at affiliated academic institutions may be a regular one, a non-salaried clinical or courtesy appointment, or an adjunct appointment, depending upon the regulations of the academic institution.

B. Advisory Committee

1. There must be an advisory committee composed of individuals(s) from the community of interest, (i.e., pathologists, other physicians, scientific consultants, academic professionals, administrators, practicing cytogenetic technologists and other health professionals) who have knowledge of cytogenetic education.

2. Responsibilities

The advisory committee of the program shall have input into any of the program/curriculum with regard to its current relevance and effectiveness into the medical content of the program.

For DMS

A. Program Director

1. The program must have a qualified program director.

2. Responsibilities

The program director shall be responsible for the organization, administration, periodic review, planning, development, evaluation, and general effectiveness of the program. The program director shall have input into budget preparation and must be responsible for maintaining NAACLS accreditation of the program.

For DMS (continued)

3. Qualifications:

The program director must be a clinical laboratory scientist/medical technologist, clinical laboratory specialist in cytogenetics or molecular biology laboratory specialist who holds nationally recognized certification and who has a master's or doctoral degree and three years of experience in clinical laboratory science or diagnostic molecular education that includes teaching courses, conducting and managing clinical laboratory learning experiences, evaluating student achievement, providing input into curriculum development, policy and procedure formulation, and evaluation of program effectiveness. The program director must have a knowledge of education methods and administration, as well as current accreditation and certification procedures.

4. Faculty Appointments

The program director must have a faculty appointment at the sponsoring institution or must have a faculty appointment in each affiliated academic institution. In the case of a clinically based program, the program director's appointment at affiliated academic institutions may be a regular one, a non-salaried clinical or courtesy appointment, or an adjunct appointment, depending upon the regulations of the academic institution.

B. Advisory Committee

1. There must be an advisory committee composed of individual(s) from the community of interest, (i.e., pathologists, other physicians, scientific consultants, academic professionals, administrators. Practicing laboratory clinical laboratory scientist/medical technologists, practicing clinical laboratory technicians/medical laboratory technicians, and other health professionals) who have knowledge of molecular science education.

2. Responsibilities

The advisory committee of the program shall have input into any of the program/curriculum with regard to its current relevancy and effectiveness into the medical content of the program.

For HT

A. Program Director

1. The program must have a qualified program director.

2. Responsibilities

The program director must be responsible for the organization, administration, periodic review, planning, development, evaluation and general effectiveness of the program. The program director must have input into budget preparation and must be responsible for maintaining NAACLS accreditation of the program.

3. Qualifications

a. The program director must:
- have a baccalaureate degree, and
- have three years of experience in medical or laboratory education that includes teaching courses, conducting and managing learning experiences, evaluating student achievement, providing input into curriculum development, policy and procedure formulation, evaluation of program effectiveness , and
- have knowledge of education methods and administration as well as current accreditation and certification procedures.

b. The program director must be nationally certified in histotechnology, or, if the program director is not certified in histotechnology, a qualified, nationally certified in histotechnology education coordinator must be an employee of the sponsoring institution or a contractual relationship between the parties must be documented.

4. Faculty Appointments

The program director must have a faculty appointment at the sponsoring institution or must have faculty appointments in each affiliated academic institution. In the case of a clinically based program, the program director's appointment at affiliated academic institutions may be a regular one, a non-salaried clinical or courtesy appointment, or an adjunct appointment, depending upon the regulations of the academic institution.

AA. Education Coordinator (when required)

1. Responsibilities

The education coordinator, when required, must provide supervision and coordination of the instructional faculty in the academic and clinical phases of the education program.

2. Qualifications

The education coordinator, when required, shall be a histotechnology professional who is certified in histotechnology by a nationally recognized certifying agency, and who has

at least an associate's degree and three years of experience in histotechnology. The education coordinator must have knowledge of education methods and current accreditation and certification procedures.

B. Advisory Committee

1. There must be an advisory committee composed of individuals from the community of interest which may include pathologists, other physicians, scientific consultants, academic professionals, administrators, histotechnologists, histotechnicians, guidance counselors, or other medical professionals with a basic knowledge of laboratory medicine.

2. Responsibilities

The advisory committee of the program shall have input into aspects of the program / curriculum with regard to its current relevancy and effectiveness.

For HTL

A. Program Director

1. The program must have a qualified program director.

2. Responsibilities

The program director must be responsible for the organization, administration, periodic review, planning, development, evaluation and general effectiveness of the program. The program director must have input into budget preparation and must be responsible for maintaining NAACLS accreditation of the program.

3. Qualifications

a. The program director must:

- have a baccalaureate degree, and
- have three years of experience in medical or laboratory education that includes teaching courses, conducting and managing learning experiences, evaluating student achievement, providing input into curriculum development, policy and procedure formulation, evaluation of program effectiveness , and
- have knowledge of education methods and administration as well as current accreditation and certification procedures.

b. The program director must be nationally certified in histotechnology, or, if the program director is not certified in histotechnology, a qualified, nationally certified in histotechnology education coordinator must be an employee of the sponsoring institution or a contractual relationship between the parties must be documented.

4. Faculty Appointments

The program director must have a faculty appointment at the sponsoring institution or must have faculty appointments in each affiliated academic institution. In the case of a clinically based program, the program director's appointment at affiliated academic institutions may be a regular one, a non-salaried clinical or courtesy appointment, or an adjunct appointment, depending upon the regulations of the academic institution.

5. Education Coordinator (when required)

A. Responsibilities

The education coordinator, when required, must provide supervision and coordination of the instructional faculty in the academic and clinical phases of the education program.

B. Qualifications

The education coordinator, when required, shall be a histotechnology professional who is certified in histotechnology by a nationally recognized certifying agency, and who has at least a baccalaureate degree and three years of experience in histotechnology. The education coordinator must have knowledge of educational methods and current accreditation/certification procedures.

For HTL (continued)

B. Advisory Committee

1. There must be an advisory committee composed of individuals from the community of interest which may include pathologists, other physicians, scientific consultants, academic professionals, administrators, histotechnologists, histotechnicians, guidance counselors, or other medical professionals with a basic knowledge of laboratory science education.

2. Responsibilities

The advisory committee of the program shall have input into aspects of the program / curriculum with regard to its current relevancy and effectiveness.

For PathA

A. Program Director

1. The program must have a qualified program director

2.. Responsibilities

The program director must be responsible for the organization, administration, periodic review, planning, development, evaluation and general effectiveness of the program. The program director must have input into budget preparation and must be responsible for maintaining NAACLS accreditation of the program.

3. Qualifications

The program director shall have a faculty appointment in the sponsoring institution and meet all requirements specified by the institution responsible for providing the didactic portion of the educational program and maintaining the overall operation of the program. The program director shall be a graduate of a NAACLS-accredited (AAPA approved prior to 1995) pathologists' assistant educational program with an advanced degree (masters or doctoral), or a board-certified anatomic pathologist, or hold a doctoral degree in a basic medical science. The program director shall have practical knowledge of educational methods, and current accreditation and certification procedures.

4. Faculty Appointments

The program director must have a faculty appointment at the sponsoring institution or must have a faculty appointment in each affiliated academic institution.

B. Advisory Committee

1. Composition

The program must have an advisory committee composed of individuals from the communities of interest (i.e., pathologists, other physicians, scientific consultants, academic professionals, administrators, practicing pathologists' assistants, and other professionals who have knowledge of clinical laboratory science education).

For PathA (continued)

2. Responsibilities

The advisory committee shall have input into all aspects of the program and curriculum regarding relevance and effectiveness.

C. Medical Advisor/Medical Director

1. The Program must have a qualified medical advisor/director separate from the Program Director.

2. Responsibilities

The medical advisor/director shall provide continuous medical direction for clinical instruction. The medical advisor/director shall actively elicit the understanding and support of practicing physicians, and shall participate in the clinical instruction of pathology within the program.

3. Qualifications

The medical advisor/director shall have a faculty appointment in the sponsoring institution and shall be a licensed, board-certified anatomic pathologist.

Attach appropriate documentation in boxes below

Standard 20A1 - Documentation: Submit a completed Faculty Fact Sheet for the program director. (Narrative not required)

Standard 20A2 - Documentation: Submit a position description which describes the responsibilities of the program director. (Narrative not required)

Standard 20A3 - Documentation: Submit the curriculum vita for the program director. Indicate the date that NAACLS approved the program director. Indicate how knowledge of education, administration and current accreditation/certification procedures was obtained. (Narrative not required)

Standard 20A4 - Documentation: Document the faculty appointment for the program director at each affiliated academic institution. (Narrative not required)

FOR HT&HTL ONLY

Standard 20A5a - ***Documentation:*** *Submit a completed Faculty Fact Sheet for the education coordinator. (Narrative not required)*

Standard 20A5b- ***Documentation:*** *Submit a position description which describes the responsibilities of the education coordinator. (Narrative not required)*

Standard 20A5c - ***Documentation:*** *Submit the curriculum vita for the education coordinator. Indicate the date that NAACLS approved the education coordinator. Indicate how knowledge of education, administration and current accreditation/certification procedures was obtained. (Narrative not required)*

Attach appropriate documentation in boxes below

Standard 20B1 - Documentation: Submit the name(s) comprising the advisory committee. Indicate the relationship of the advisory committee member(s)to the program. (Narrative not required)

Standard 20B2 - Documentation: Submit a copy of the advisory committee meeting minutes. (Narrative required)

Standard 20B2 - Narrative: Describe the responsibilities of the advisory committee.

FOR PA ONLY

Standard 20C1 ***- Documentation:*** *Submit a completed Faculty Fact Sheet for the medical director/advisor. (Narrative not required)*

Standard 20C2 ***- Documentation:*** *Submit a position description which describes the responsibilities of the medical director/advisor. (Narrative not required)*

Standard 20C3 ***- Documentation:*** *Submit the curriculum vita for the medical director/advisor.* Document the faculty appointment for the medical director/advisor *(Narrative not required)*

Unique Standards and Documentation Required for Accredited Programs:
Self Study Report

Standard 21: Faculty

For CLS/MT

The program must have qualified faculty (e.g., clinical laboratory scientists/medical technologists, administrators, managers and physicians).

A. Responsibilities

The faculty must participate in teaching courses, supervising applied laboratory learning experiences, evaluating student achievement, developing curriculum, formulating policy and procedures, and evaluating program effectiveness.

B. Qualifications

Faculty designated by the program must demonstrate adequate knowledge and proficiency in their content areas and demonstrate the ability to teach effectively at the appropriate level.

C. Professional Development

The program must assure and document ongoing professional development of the program faculty to assure that the faculty members are able to fulfill their instructional responsibilities.

D. Consortium Education Coordinator (when required, one at each participating entity in a consortium or joint venture)

1. Responsibilities

The Consortium Education Coordinator, when required, is responsible for coordinating classroom teaching and applied education, evaluating program effectiveness, and must have appropriate communications with the Program Director.

2. Qualifications

The education coordinator, when required, must hold an appropriate nationally recognized certification required of a program director as stated in Standard 20, an academic degree appropriate to the program level, and at least one year of experience in clinical laboratory science education, including teaching courses, conducting and managing learning experiences, evaluation student achievement, and evaluating instructional effectiveness.

For CLT/MLT

The program must have qualified faculty (e.g., clinical laboratory scientists/medical technologists, clinical laboratory technicians/medical laboratory technicians, administrators, managers and physicians).

A. Responsibilities

The faculty must participate in teaching courses, supervising applied laboratory learning experiences, evaluating student achievement, developing curriculum, formulating policy and procedure, and evaluating program effectiveness.

For CLT/MLT (continued)

B. Qualifications

Faculty designated by the program must demonstrate adequate knowledge and proficiency in their content areas and the ability to teach effectively at the appropriate level.

C. Professional Development

The program must assure and document ongoing professional development of the program faculty to assure that the faculty members are able to fulfill their instructional responsibilities.

D. Consortium Education Coordinator (when required, one at each participating entity in a consortium or joint venture)

1. Responsibilities

The Consortium Education Coordinator, when required, is responsible for coordinating classroom teaching and applied education, evaluating program effectiveness, and must have appropriate communications with the Program Director.

2. Qualifications

The education coordinator, when required, must hold an appropriate nationally recognized certification required of a program director as stated in Standard 20, an academic degree appropriate to the program level, and at least one year of experience in clinical laboratory science education, including teaching courses, conducting and managing learning experiences, evaluation student achievement, and evaluating instructional effectiveness.

For CG

The program must have qualified didactic and clinical faculty. (Didactic faculty are defined as persons teaching the didactic components of cytogenetic technology. Clinical faculty are defined as instructors teaching the clinical skills components of cytogenetic technology).

A. Faculty Responsibilities

The faculty must participate in teaching courses, supervising applied laboratory learning experiences, evaluating student achievement, developing curriculum, formulating policy and procedures, and evaluating program effectiveness. Faculty must have a working knowledge of educational methodologies and cytogenetic techniques.

B. Qualifications

1. Didactic Faculty

Didactic Faculty designated by the program must demonstrate adequate knowledge and proficiency in their content area and demonstrate the ability to teach effectively at the appropriate level. Didactic faculty must have a minimum of a bachelor's degree. Didactic faculty must also hold an academic appointment at their institution.

For CG (continued)

2. Clinical Faculty

Clinical instructors must hold a minimum of a Bachelor's degree with 3 years of full-time cytogenetic experience and maintain current certification in cytogenetic technology.

C. Professional Development

The program must assure and document ongoing professional development of the program faculty to assure that the faculty members are able to fulfill their instructional responsibilities.

D. Consortium Education Coordinator (when required, one at each participating entity in a consortium or joint venture)

1. Responsibilities

The Consortium Education Coordinator, when required, is responsible for coordinating classroom teaching and applied education, evaluating program effectiveness, and must have appropriate communications with the Program Director.

2. Qualifications

The education coordinator, when required, must hold an appropriate nationally recognized certification required of a program director as stated in Standard 20, an academic degree appropriate to the program level, and at least one year of experience in clinical laboratory science education, including teaching courses, conducting and managing learning experiences, evaluation student achievement, and evaluating instructional effectiveness.

For DMS

The program must have qualified faculty (e.g., clinical laboratory scientist/medical technologists, administrators, managers and physicians).

A. Responsibilities

The faculty shall participate in teaching courses, supervising diagnostic molecular laboratory learning experiences, evaluating student achievement, developing curriculum, formulating policy and procedures, and evaluating program effectiveness.

B. Qualifications

Faculty designated by the program must demonstrate adequate knowledge and proficiency in their content areas and demonstrate the ability to teach effectively at the appropriate level.

C. Professional Development

The program must assure and document ongoing professional development of the program faculty to assure that the faculty are able to fulfill their instructional responsibilities.

For DMS (continued)

D. Consortium Education Coordinator (when required, one at each participating entity in a consortium or joint venture)

1. Responsibilities

The Consortium Education Coordinator, when required, is responsible for coordinating classroom teaching and applied education, evaluating program effectiveness, and must have appropriate communications with the Program Director.

2. Qualifications

The education coordinator, when required, must hold an appropriate nationally recognized certification required of a program director as stated in Standard 20, an academic degree appropriate to the program level, and at least one year of experience in clinical laboratory science education, including teaching courses, conducting and managing learning experiences, evaluation student achievement, and evaluating instructional effectiveness.

For HT

The program must have qualified faculty (e.g., histotechnologists, histotechnicians, administrators, managers, or physicians).

A. Responsibilities

The faculty must participate in teaching courses, supervising applied laboratory learning experiences, evaluating student achievement, developing curriculum, formulating policy and procedure, and evaluating program effectiveness.

B. Qualifications

Faculty designated by the program must demonstrate adequate knowledge and proficiency in their content areas and the ability to teach effectively at the appropriate level.

C. Professional Development

The program must assure and document ongoing professional development of the program faculty to assure that the faculty members are able to fulfill their instructional responsibilities.

D. Consortium Education Coordinator (when required, one at each participating entity in a consortium or joint venture)

1. Responsibilities

The Consortium Education Coordinator, when required, is responsible for coordinating classroom teaching and applied education, evaluating program effectiveness, and must have appropriate communications with the Program Director.

2. Qualifications

The education coordinator, when required, must hold an appropriate nationally recognized certification required of a program director as stated in Standard 20, an academic degree appropriate to the program level, and at least one year of experience in clinical laboratory science education, including teaching courses, conducting and managing learning experiences, evaluation student achievement, and evaluating instructional effectiveness.

For HTL

The program must have qualified faculty (e.g., histotechnologists, histotechnicians, administrators, managers, or physicians).

A. Responsibilities

The faculty must participate in teaching courses, supervising applied laboratory learning experiences, evaluating student achievement, developing curriculum, formulating policy and procedure, and evaluating program effectiveness.

B. Qualifications

Faculty designated by the program must demonstrate adequate knowledge and proficiency in their content areas and demonstrate the ability to teach effectively at the appropriate level.

C. Professional Development

The program must assure and document ongoing professional development of the program faculty to assure that the faculty members are able to fulfill their instructional responsibilities.

D. Consortium Education Coordinator (when required, one at each participating entity in a consortium or joint venture)

1. Responsibilities

The Consortium Education Coordinator, when required, is responsible for coordinating classroom teaching and applied education, evaluating program effectiveness, and must have appropriate communications with the Program Director.

2. Qualifications

The education coordinator, when required, must hold an appropriate nationally recognized certification required of a program director as stated in Standard 20, an academic degree appropriate to the program level, and at least one year of experience in clinical laboratory science education, including teaching courses, conducting and managing learning experiences, evaluation student achievement, and evaluating instructional effectiveness.

For PathA

The program must have qualified faculty (e.g., educators, pathologists' assistant supervisors, administrators, laboratorians, and physicians).

A. Responsibilities

The faculty must participate in developing curriculum, formulating policy and procedures, teaching courses, supervising applied laboratory learning experiences, evaluating student achievement, and evaluating program effectiveness.

B. Qualifications

Program faculty must demonstrate practical knowledge and proficiency in their content areas. Faculty members must demonstrate the ability to teach effectively at a level consistent with entry into the profession.

For PathA (continued)

C. Professional Development

The program must document ongoing professional development of the program faculty to demonstrate a continuing effort to increase practical knowledge and proficiency.

D. Consortium Education Coordinator (when required, one at each participating entity in a consortium or joint venture)

1. Responsibilities

The Consortium Education Coordinator, when required, is responsible for coordinating classroom teaching and applied education, evaluating program effectiveness, and must have appropriate communications with the Program Director.

2. Qualifications

The education coordinator, when required, must hold an appropriate nationally recognized certification required of a program director as stated in Standard 20, an academic degree appropriate to the program level, and at least one year of experience in clinical laboratory science education, including teaching courses, conducting and managing learning experiences, evaluation student achievement, and evaluating instructional effectiveness.

Standard 21 - Narrative: No Narrative Required

Standard 21 - Documentation: List the **major** clinical/didactic faculty for each laboratory discipline.

(Notify NAACLS if you have more faculty than the spaces below provide)

***Faculty Member*:**	***Laboratory Discipline/Content Area*:**

Standard 21A - Narrative: Describe the responsibilities of the program faculty.

Standard 21A - Documentation: *No Documentation Required*

Standard 21B - Narrative: Describe how faculty are evaluated relative to appropriate qualifications.

Standard 21B - Documentation: Submit completed Faculty Fact Sheets for the major didactic faculty for each laboratory discipline. (List details of major clinical faculty on Clinical Facility Fact Sheets.)

(Notify NAACLS if you have more faculty than the spaces below provide)

Faculty Name:	**Faculty Fact Sheet:** **(Please attach documents in boxes below)**

Standard 21C - Narrative: Describe how the program ensures ongoing professional development of its' clinical and didactic faculty.

Standard 21C - Documentation: Submit sample documentation of ongoing professional development of the clinical and didactic faculty to fulfill instructional abilities.

Attach appropriate documentation in box above

Unique Standards and Documentation Required for Accredited Programs:
Self Study Report

Standard 22: Curricular Requirements

For CLS/MT

A. Curricular Structure

Instruction must follow a plan which documents a structured curriculum composed of general education, basic sciences, and professional courses including applied (clinical) education. The curriculum must include clearly written program goals and competencies and course syllabi which must include individual course goals and objectives.

The curriculum must include all the major subject areas currently offered in the contemporary clinical laboratory. Behavioral objectives which address cognitive, psychomotor, and affective domains must be provided for didactic and applied (clinical practice) aspects of the program and must include clinical significance and correlation. Course objectives must show progression to the level consistent with entry into the profession.

B. Instructional Areas

The curriculum must include:

1. Scientific content (either prerequisite or as an integral part of the curriculum) to encompass areas such as anatomy/physiology, immunology, genetics/molecular biology, microbiology, organic/biochemistry, and statistics.

2. Pre-analytical, analytical, and post-analytical components of laboratory services, such as hematology, hemostasis, chemistry, microbiology, urinalysis, body fluids, molecular diagnostics, immunology, phlebotomy, and immunohematology. This includes principles and methodologies, performance of assays, problem-solving, troubleshooting, techniques, interpretation of clinical procedures and results, statistical approaches to data evaluation, and continuous assessment of laboratory services for all major areas practiced in the contemporary clinical laboratory.

3. Principles and practices of quality assurance/quality improvement as applied to the pre-analytical, analytical, and post-analytical components of laboratory services.

4. Application of safety and governmental regulations and standards as applied to laboratory practice.

5. Principles of interpersonal and interdisciplinary communication and team-building skills.
6. Principles and application of ethics and professionalism to address ongoing professional career development.

7. Education techniques and terminology sufficient to train/educate users and providers of laboratory services.
8. Knowledge of research design/practice sufficient to evaluate published studies as an informed consumer.

9. Concepts and principles of laboratory operations must include:
   a. Critical pathways and clinical decision making;
   b. Performance improvement;
   c. Dynamics of healthcare delivery systems as they affect laboratory service;
   d. Human resource management to include position description, performance evaluation, utilization of personnel, and analysis of workflow and staffing patterns, and;
   e. Financial management: profit and loss, cost/benefit, reimbursement requirements, materials/inventory management.

For CLS/MT (continued)

C. Learning Experiences

The learning experiences needed in the curriculum to develop and support entry level competencies must be properly sequenced and include instructional materials, classroom presentations, discussion, demonstrations, laboratory sessions, supervised practice and experience.

1. Student experiences must be educational and balanced so that all competencies can be achieved.

2. Student experiences at different clinical sites must be comparable to enable all students to achieve entry level competencies.

3. Policies and processes by which students may perform service work must be published and made known to all concerned in order to avoid practices in which students are substituted for regular staff. After demonstrating proficiency, students, with qualified supervision, may be permitted to perform procedures. Service work by students in clinical settings outside of academic hours must be noncompulsory.

D. Evaluations

Written criteria for passing, failing, and progression in the program must be provided. These must be given to each student at the time of entry into the program. Evaluation systems must be related to the objectives and competencies described in the curriculum for both didactic and applied components. They must be employed frequently enough to provide students and faculty with timely indications of the students' academic standing and progress and to serve as a reliable indicator of the effectiveness of instruction and course design.

For CLT/MLT

A. Curricular Structure

Instruction must follow a plan which documents a structured curriculum composed of general education, basic sciences, mathematics, and professional courses including applied (clinical) education. The curriculum must include clearly written program goals and competencies and course syllabi which must include individual course goals and objectives.

The curriculum must include all the major subject areas currently offered in the contemporary clinical laboratory. Behavioral objectives which address cognitive, psychomotor, and affective domains must be provided for didactic and applied (clinical practice) aspects of the program and must include clinical significance and correlation. Course objectives must show progression to the level consistent with entry into the profession.

The applied courses must be taught in a clinically equipped teaching laboratory on the college campus, in an affiliated clinical facility, or in both facilities sufficient for developing basic skills, understanding principles, and mastering the procedures involved.

For CLT/MLT (continued)

B. Instructional Areas

The curriculum must include principles of:

1. Methodologies for all major areas currently practiced by a modern clinical laboratory, including problem solving and troubleshooting techniques;
2. Collecting, processing, and analyzing biological specimens and other substances;
3. Laboratory result use in diagnosis and treatment;
4. Communications sufficient to serve the needs of patients and the public;
5. The required competencies to participate in the orientation of new employees;
6. Quality assessment in the laboratory;
7. Laboratory safety and regulatory compliance;
8. Information processing in the clinical laboratory;
9. Ethical and professional conduct, and;
10. Significance of continued professional development.

C. Learning Experiences

The learning experiences needed in the curriculum to develop and support entry level competencies must be properly sequenced and include instructional materials, classroom presentations, discussion, demonstrations, laboratory sessions, supervised practice and experience.

1. Student experiences must be educational and balanced so that all competencies can be achieved.

2. Student experiences at different clinical sites must be comparable to enable all students to achieve entry level competencies.

3. Policies and processes by which students may perform service work must be published and made known to all concerned in order to avoid practices in which students are substituted for regular staff. After demonstrating proficiency, students, with qualified supervision, may be permitted to perform procedures. Service work by students in clinical settings outside of academic hours must be noncompulsory.

D. Evaluations

Written criteria for passing, failing, and progression in the program must be provided. These must be given to each student at the time of entry into the program. Evaluation systems must be related to the objectives and competencies described in the curriculum for both didactic and applied education components. They must be employed frequently enough to provide students and faculty with timely indications of the students' academic standing and progress and to serve as a reliable indicator of the effectiveness of instruction and course design.

For CG

A. Curricular Structure

Instruction must follow a plan which documents a structured curriculum, including applied education, with clearly written program goals. Course syllabi must include individual course objectives and competencies to be achieved and evaluation criteria.

The curriculum must include all major subject areas currently offered in the contemporary full-service cytogenetic laboratory. Behavioral objectives which address cognitive, psychomotor, and affective domains must be provided for didactic and applied (clinical practice) aspects of the program **and must include clinical significance and correlation.** Course objectives must show progression to the level consistent with entry into the profession.

B. Instructional Areas

The following areas of study must be included in either the professional program or as pre-requisites:

1. General Biology, General Chemistry, Biochemistry or Cell Biology, Genetics, Hematology, Microbiology, Immunology.
2. Principles, practice, and acquisition of computer technology.
3. Cytogenetics
    a. history of cytogenetics
    b. mechanisms of numerical and structural abnormalities
    c. clinical correlation of autosomal and sex chromosome anomalies
    d. cancer cytogenetics and clinical correlation between diagnosis and treatment
    e. molecular applications of cytogenetics
4. Principles and methodologies for all major areas (competencies) commonly practiced by a full service diagnostic cytogenetic laboratory, to include:
    a. specimen processing
    b. appropriate cell and tissue culture techniques
    c. harvest techniques
    d. chromosome banding and staining techniques
    e. fluorescence in situ hybridization (FISH) Techniques
    f. microscopy and image analysis
    g. chromosome analysis
5. Principles and practices of laboratory management and supervision.
6. General laboratory practice, safety, quality control and continuous quality improvement, and professional and ethical standards

C. Learning Experiences

The learning experiences needed in the curriculum to develop entry level competencies must be properly sequenced and include instructional materials, classroom presentations, discussions, demonstrations, laboratory sessions, supervised practice and experience.

1. Student experiences must be educational and balanced so that all competencies can be achieved.
2. Student experiences at different clinical sites must be comparable to enable students to achieve entry level competencies.
3. Policies and processes by which students may perform service work must be published and made known to all concerned in order to avoid practices in which students are substituted for regular staff. After demonstration proficiency, students, with qualified supervision, may be permitted to perform procedures. Service work by students in applied settings outside of regular academic hours must be noncompulsory

For CG (continued)

D. Evaluations

Include written criteria for passing, failing, and progression in the program. These must be given to each student at the time of entry into the program. Evaluation systems must be related to the objectives and competencies described in the curriculum for both didactic and applied components. They must be employed frequently enough to provide students and faculty with timely indications of the students' academic standing and progress and to serve as a reliable indicator of the effectiveness of instruction and course design.

For DMS

A. Curricular structure:

Instruction must follow a plan that documents a structured curriculum including applied education with clearly written program goals. Course syllabi must include individual course objectives and competencies to be achieved and evaluation criteria.

The curriculum must include pre-analytical, analytical, and post-analytical components of diagnostic molecular laboratory services covering diagnostic molecular tests used to detect or diagnose acquired (infectious and non-infectious) diseases and genetic pre-disposition or disorders. Behavioral objectives which address cognitive, psychomotor, and affective domains must be provided for didactic and applied (clinical practice) aspects of the program and must include clinical significance and correlation. Course objectives must show progression to the level consistent with entry into the profession.

B. Instructional areas:

The following areas of study must be included in either the professional program or as pre-requisites:

1. organic and/or biochemistry, genetics, cell biology, microbiology, immunology, and diagnostic molecular biology.
2. principles, methodologies, and applications of molecular microbiology (infectious diseases), molecular pathology (hematology/oncology), and molecular genetics. Techniques of molecular science must include at least two techniques in each of separation and detection, amplification, and sequence analysis.
3. clinical significance of laboratory procedures in diagnosis and treatment;
4. principles and practices of quality management;
5. principles and practices of laboratory administration, supervision, safety, and problem solving;
6. principles and practices of professional conduct;
7. principles and practices of applied study design, implementation and dissemination of results.

C. Learning Experiences

The learning experiences needed in the curriculum to develop entry level competencies must be properly sequenced and include instructional materials, classroom presentations, discussions, demonstrations, laboratory sessions, supervised practice and experience.

For DMS (continued)

1. Student experiences must be educational and balanced so that all competencies can be achieved.

2. Student experiences at different applied sites must be comparable to enable students to achieve entry level competencies.

3. Policies and processes by which students may perform service work must be published and made known to all concerned in order to avoid practices in which students are substituted for regular staff. After demonstrating proficiency, students, with qualified supervision, may be permitted to perform procedures. Service work by students in applied settings outside of regular academic hours must be noncompulsory.

D. Evaluations

Written criteria for passing, failing, and progression in the program must be provided. These shall be given to each student at the time of entry into the program. Evaluation systems shall be related to the objectives and competencies described in the curriculum for both didactic and applied components. They must be employed frequently enough to provide students and faculty with timely indications of the students' academic standing and progress and to serve as a reliable indicator of the effectiveness of instruction and course design.

For HT

A. Curricular Structure

Instruction must follow a plan which documents a structured curriculum composed of basic sciences, mathematics, and professional courses including applied (clinical) education. The curriculum must include clearly written program goals and competencies with syllabi which include individual course goals and objectives.

The curriculum must include all the major subject areas currently offered in the contemporary clinical histopathology laboratory. Behavioral objectives which address cognitive, psychomotor, and affective domains must be provided for didactic and applied aspects of the program and must include clinical significance and correlation. Course objectives must show progression to the level consistent with entry into the profession.
The applied courses must be taught in a clinically equipped teaching laboratory on the college campus, in an affiliated clinical facility, or in both facilities sufficient for developing basic skills, understanding principles, and mastering the procedures involved.

B. Instructional Areas

The curriculum must include:

1. Methodologies for all major areas currently practiced by a modern histopathology laboratory, including problem solving and troubleshooting techniques;
2. Receiving and documenting, processing, and analyzing biological specimens and other substances;
3. Histopathologic examination utilization in diagnosis and treatment;
4. Communications sufficient to serve the needs of patients and the public;
5. Technical training sufficient to orient new employees:

For HT (continued)

6. Quality assessment in the laboratory;
7. Laboratory safety and regulatory compliance;
8. Information processing in the clinical histopathology laboratory;
9. Ethical and professional conduct; and,
10. Significance of continued professional development.

C. Learning Experiences

The learning experiences needed in the curriculum to develop and support entry level competencies must be properly sequenced and include instructional materials, classroom presentation, discussion, demonstrations, laboratory sessions, supervised clinical practice and experience.

1. Student experiences must be educational and balanced so that all competencies can be achieved.

2. Student experiences at different clinical sites must be comparable to enable all students to achieve entry level competencies. At all clinical sites, the students must be supervised by a nationally certified histotechnician or histotechnologist.

3. Policies and processes by which students may perform service work must be published and made known to all concerned in order to avoid practices in which students are substituted for regular staff. After demonstrating proficiency, students, with qualified supervision, may be permitted to perform procedures. Service work by students in clinical settings outside of academic hours must be noncompulsory.

D. Evaluations

Written criteria for passing, failing, and progression in the program must be provided. These must be given to each student at the time of entry into the program. Evaluation systems must be related to the objectives and competencies described in the curriculum for both didactic and applied education components. They must be employed frequently enough to provide students and faculty with timely indications of the students' academic standing and progress and to serve as a reliable indicator of the effectiveness of instruction and course design.

For HTL

A. Curricular Structure

Instruction must follow a plan which documents a structured curriculum composed of basic sciences, mathematics, and professional courses including applied clinical education. The curriculum must include clearly written program goals and competencies with course syllabi which include individual course goals and objectives.

The curriculum must include all the major subject areas currently offered in the contemporary clinical histopathology laboratory. Behavioral objectives which address cognitive, psychomotor, and affective domains must be provided for didactic and applied (clinical) aspects of the program and must include clinical significance and correlation. Course objectives must show progression to the level consistent with entry into the profession.

The applied courses must be taught in a clinically equipped teaching laboratory on the college campus, in an affiliated clinical facility, or in both facilities sufficient for developing basic skills, understanding principles, and mastering the procedures involved.

B. Instructional Areas

The curriculum must include:

1. Scientific content (either prerequisite or as an integral part of the curriculum) to encompass areas such as biology, chemistry and mathematics.

2. Applications of histology, immunohistochemistry, enzyme histochemistry, and microscopy. This includes principles and methodologies, performance of tests, problem-solving, troubleshooting, techniques, interpretation of procedures and results of laboratory services for all major areas practiced in the contemporary histopathology laboratory.

3. Principles and practices of quality assurance, improvement, and assessment as applied to the contemporary histopathology laboratory.

4. Application of safety and governmental regulations and standards as applied to laboratory practice.

5. Principles of interpersonal and interdisciplinary communication and team building skills.

6. Principles and application of ethics and professionalism to address ongoing professional career development.

7. Education techniques and terminology sufficient to train/educate users and providers of laboratory services.

8. Knowledge of research design/practice sufficient to evaluate published studies as an informed consumer.

9. Concepts and principles of laboratory operations must include:

   a. Fixation
   b. Frozen Sectioning
   c. Processing
   d. Decalcification
   e. Embedding
   f. Microtomy
   g. Routine and special stains
   h. Instrumentation
   i. Tissue identification and microscopy
   j. Accessioning
   k. Laboratory Mathematics
   l. Immunohistochemistry, including enzyme pretreatment
   m. Laboratory safety
   n. Human Resource Management to include position description, performance evaluation, utilization of personnel, and analysis of workflow and staffing patterns
   o. Financial management: profit and loss; cost/benefit, reimbursement requirements, materials/inventory management
   p. Education methodologies

For HTL (continued)

C. Learning Experiences

The learning experiences needed in the curriculum to develop and support entry level competencies must be properly sequenced and include instructional materials, classroom presentation, discussion, demonstrations, laboratory sessions, supervised clinical practice and experience.

1. Student experiences must be educational and balanced so that all competencies can be achieved.

2. Student experiences at different clinical sites must be comparable to enable all students to achieve entry level competencies. At all clinical sites, the students must be supervised by a nationally certified histotechnician or histotechnologist.

3. Policies and processes by which students may perform service work must be published and made known to all concerned in order to avoid practices in which students are substituted for regular staff. After demonstrating proficiency, students, with qualified supervision, may be permitted to perform procedures. Service work by students in clinical settings outside of academic hours must be noncompulsory.

D. Evaluations

Written criteria for passing, failing, and progression in the program must be provided. These must be given to each student at the time of entry into the program. Evaluation systems must be related to the objectives and competencies described in the curriculum for both didactic and applied (clinical practice) components. They must be employed frequently enough to provide students and faculty with timely indications of the students' academic standing and progress and to serve as a reliable indicator of the effectiveness of instruction and course design.

For PathA

A. Curricular Structure

Instruction must follow a plan which documents a structured curriculum composed of general education, basic sciences, and professional courses including applied (clinical) education. The curriculum must include clearly written program goals and course syllabi, which must include individual course goals.

The length of the educational program for the pathologists' assistant shall be a minimum of 22 months. The program must culminate in a minimum of a baccalaureate degree with documentation of completion of the clinical educational program. The curriculum shall contain both clinical and didactic elements. The evaluation procedures shall be clearly established and the criteria for the successful completion of the program made available to each student.

The curriculum must include all major subject areas currently offered in the contemporary surgical pathology and autopsy laboratories. Curriculum content shall provide the student with a comprehensive body of knowledge and the necessary skills to accurately and reliably perform the tasks, functions and duties defined in the Preamble.

Behavioral objectives, which address cognitive, psychomotor, and affective domains, must be provided for Professional Sequence courses and for courses principally taught by Program faculty. These objectives must address the scientific content areas of the program and must include clinical significance and correlation. Course objectives must show progression to the level consistent with entry into the profession.

Course Syllabi are required for cognate courses as content area must be consistent with the goals and competencies for the program.

B. Instructional Areas

Prerequisite college course work shall include general chemistry, organic chemistry and/or biochemistry, biological science, microbiology, mathematics and English composition.

The program curriculum must include the following scientific content:

Professional Sequence Courses:
Anatomic Pathology Management
Gross Autopsy Pathology Techniques
Gross Forensic Pathology/Toxicology Specimen Techniques
Gross Pediatric Pathology Techniques
Gross Surgical Pathology Techniques
Educational Methodologies

Required Cognates:
Clinical Pathology
Computerization and Information Systems
Embryology
General and Systemic Human Pathology
Histology/Microscopic Anatomy
Human Anatomy
Human Physiology
Medical Ethics
Medical Microbiology
Medical Photography
Medical Terminology
Safety Regulations

C. Learning Experience

The learning experiences needed in the curriculum must be properly sequenced and include: Instructional materials, classroom and laboratory presentations, discussion and demonstrations, supervised practice and experience, Evaluation of students to assess cognitive, affective and psychomotor objectives; problem solving skills; and motor and clinical competencies, and the competencies necessary for graduation.

1. Student experiences must be educational and balanced so that all competencies can be achieved.

2. Student experiences at different clinical sites must be comparable to enable all students to achieve entry level competencies.

3. Policies and processes by which students may perform service work must be published and made known to all concerned in order to avoid practices in which students are substituted for regular staff. After demonstrating proficiency, students, with qualified supervision, may be permitted to perform procedures. Service work by students in clinical settings outside of academic hours must be noncompulsory.

D. Evaluations

Written criteria for passing, failing, and progression in the program must be provided. These must be given to each student at the time of entry into the program. Evaluation systems must be related to the objectives and competencies described in the curriculum for both didactic and applied components. They must be employed frequently enough to provide students and faculty with timely indications of the students' academic standing and progress and to serve as a reliable indicator of the effectiveness of instruction and course design.

Standard 22A - Narrative: Narrative Not Required for CLS/MT, CG, DMS, HTL, and PathA

FOR CLT/MLT and HT ONLY

Standard 22A - Narrative: *Note where applied courses are taught (i.e. clinically equipped student laboratory on a college campus, affiliated clinical facility, or both)*

Standard 22A - Documentation:

Submit a structured curriculum plan (or sequence of courses).

Submit the program goals and competencies.

Submit course syllabi with course goals and behavioral objectives for ONE SAMPLE UNIT OF INSTRUCTION. The sample unit should have both lecture and laboratory/clinical components.

Submit objectives in the cognitive, psychomotor and affective domains for ONE SAMPLE UNIT OF INSTRUCTION.

FOR PathA ONLY ***Standard 22A Documentation:*** *Submit criteria and sample documentation for completion of the program.*

Attach appropriate documentation in boxes above

Standard 22B - Narrative:

Describe the coursework required for completion of the program and indicate whether the course work is addressed as part of the professional program or prior to admission to the program.

Identify where the items described in Standard 22B are included in the curriculum.

***FOR PathA ONLY* -** *Identify all Required Cognate courses substantially or fully taught by PathA program faculty*

Standard 22B Documentation:

Submit brief summaries or course descriptions for each unit of instruction or course in the program.

***FOR PathA ONLY* -** *Submit a document listing all courses from the Required Cognate list that are taught by PathA program faculty (i.e. courses designed for PathA students or courses housed within the administrative unit for the PathA program with PathA program faculty providing 40% or more of the instruction.*

Attach all appropriate documentation in boxes above

***Matrices are provided below to assist you in identifying where units of instruction are located in the program's curriculum. Use of the matrices is optional*

Standard 22B Matrix (CLS/MT)	**Page 1 / 2**	
Clinical Laboratory Scientist/Medical Technologist	**Course**	**Location or Unit Number**
Standard 22B1		
Anatomy/physiology		
Immunology		
Genetics/molecular biology		
Organic/biochemistry		
Microbiology		
Statistics		
Standard 22B2		
Pre-analytical, analytical, and post-analytical components of laboratory services		
Hematology		
Hemostasis		
Chemistry		
Microbiology		
Urinalysis		
Microscopy		
Molecular diagnostics		
Immunology		
Immunohematology		
Standard 22B3		
Principles and practices of quality assurance/quality improvement as applied to the pre-analytical components of laboratory services		
Standard 22B4		
Application of safety to laboratory practice		
Application of governmental regulations and standards as applied to laboratory practice		
Standard 22B5		
Principles of interpersonal and interdisciplinary communication and team-building		

Standard 22B Matrix (CLS/MT)	**Page 2 / 2**	
Clinical Laboratory Scientist/Medical Technologist	**Course**	**Location of Unit Number**
Standard 22B6		
Principles and application of ethics		
Principles and applications of professionalism to address ongoing professional career development		
Standard 22B7		
Education techniques and terminology sufficient to train/ educate users and providers of laboratory services		
Standard 22B8		
Knowledge of research design/practice sufficient to evaluate published studies as an informed consumer.		
Standard 22B9		
Critical pathways and clinical decision making		
Performance improvement		
Dynamics of healthcare delivery systems as they affect laboratory service		
Human resource management to include position description, performance evaluation, utilization of personnel, and analysis of workflow and staffing patterns		
Financial management: profit and loss, cost/benefit, reimbursement requirements, materials/inventory management		

Standard 22B Matrix (CLT/MLT)	Page 1 / 2	
Clinical Laboratory Technician/Medical Laboratory Technician	**Course**	**Location or Unit Number**
Standard 22B1		
Methodologies including problem solving and troubleshooting techniques		
Hematology		
Hemostasis		
Chemistry		
Microbiology		
Urinalysis		
Microscopy		
Immunology		
Immunohematology		
Standard 22B2		
Collecting, processing, and analyzing biological specimens		
Standard 22B3		
Laboratory result use in diagnosis and treatment		
Standard 22B4		
Communications sufficient to serve the needs of patients and the public		
Standard 22B5		
Technical training sufficient to orient new employees		
Standard 22B6		
Quality assessment in the laboratory		

Standard 22B Matrix (CLT/MLT)	**Page 2 / 2**	
Clinical Laboratory Technician/Medical Laboratory Technician	**Course**	**Location of Unit Number**
Standard 22B7		
Laboratory safety and regulatory compliance		
Standard 22B8		
Information processing in the clinical laboratory		
Standard 22B9		
Ethical and professional conduct		
Standard 22B10		
Significance of continued professional development		

Standard 22B Matrix (CG)	Page 1 / 2	
Cytogenetic Technologist	**Course**	**Location or Unit Number**
Standard 22B1		
Areas of study in professional or as prerequisites		
General biology		
General chemistry		
Biochemistry or cell biology		
Genetics		
Cytogenetics		
Hematology		
Microbiology		
Immunology		
Computer skills, including laboratory information systems		
Laboratory safety		
Quality control		
Standard 22B2		
Principles, practice and acquisition of computer technology		
Standard 22B3		
Cytogenetics		
History of cytogenetics		
Mechanisms of numerical and structural abnormalities		
Clinical correlation of autosomal and sex chromosome anomalies		
Cancer cytogenetics and clinical correlation between diagnosis and treatment		
Molecular applications of cytogenetics		
Standard 22B4		
Principles and practices		
Specimen processing		
Appropriate cell and tissue culture techniques		
Harvest techniques		
Chromosome banding and staining techniques		
Flourescence in situ hybridization (FISH) techniques		
Microscopy and image analysis		
Chromosome analysis		

Standard 22B Matrix (CG)	Page 2 / 2	
Cytogenetic Technology	**Course**	**Location of Unit Number**
Standard 22B5		
Principles and practices of laboratory management and supervision		
Standard 22B6		
General laboratory practice		
Safety		
Quality control and continuous quality improvement		
Professional and ethical standards		

Standard 22B Matrix (DMS)	Page 1 / 2	
Diagnostic Molecular Scientist	**Course**	**Location or Unit Number**
Standard 22B1		
Organic/biochemistry		
Genetics		
Cell biology		
Microbiology		
Immunology		
Diagnostic molecular biology		
Standard 22B2		
Principles, methodologies, and applications of:		
• molecular microbiology (infectious diseases)		
• molecular pathology (hematology/oncology)		
• molecular genetics		
Techniques of molecular science must include at least two techniques in:		
• separation and detection		
• sequence analysis		
Standard 22B3		
Clinical significance of laboratory procedures in diagnosis and treatment		
Standard 22B4		
Principles and practices of quality management		
Standard 22B5		
Principles and practices of laboratory administration, supervision, safety, and problem solving;		
Standard 22B6		
Principles and practices of professional conduct		

Standard 22B Matrix (DMS)	Page 2 / 2	
Diagnostic Molecular Scientist	**Course**	**Location of Unit Number**
Standard 22B7		
Principles and practices of applied study design, implementation and dissemination of results		

Standard 22B Matrix (HT)	Page 1 / 2	
Histotechnician	**Course**	**Location or Unit Number**
Standard 22B1		
Methodologies for all major areas currently practice by a modern histopathology laboratory, including problem solving and troubleshooting techniques		
Fixation		
Frozen sectioning		
Processing		
Decalcification		
Embedding		
Microtomy		
Routine and special stains		
Instrumentation		
Tissue identification and microscopy		
Accessioning		
Laboratory mathematics		
Laboratory safety		
Standard 22B2		
Receiving and documenting, processing and analyzing biological specimen and other substances		
Standard 22B3		
Histopathologic examination utilization in diagnosis and treatment		
Standard 22B4		
Communications sufficient to serve the needs of patients and the public		
Standard 22B5		
Technical training sufficient to serve the needs of patients and the public		
Standard 22B6		
Quality assessment in the laboratory		

Standard 22B Matrix (HT)	Page 2 / 2	
Histotechnician	**Course**	**Location of Unit Number**
Standard 22B7		
Laboratory safety and regulatory compliance		
Standard 22B8		
Information processing in the clinical histopathology laboratory		
Standard 22B9		
Ethical and professional conduct		
Standard 22B10		
Significance of continued professional development		

Standard 22B Matrix (HTL)	Page 1 / 2	
Histotechnologist	**Course**	**Location or Unit Number**
Standard 22B1		
Biology		
Chemistry		
Mathematics		
Standard 22B2		
Applications of histology, immunohistochemistry, enzyme histochemistry, and microscopy. This includes principles and methodologies, performance of tests, problem-solving, troubleshooting techniques, interpretation of procedures and results of laboratory services for all major areas practiced in the contemporary histopathology laboratory.		
Standard 22B3		
Principles and practices of quality assurance, improvement, and assessment as applied to the contemporary histopathology laboratory.		
Standard 22B4		
Application of safety and governmental regulations and standards as applied to laboratory practice.		
Standard 22B5		
Principles of interpersonal and interdisciplinary communication and team building skills.		
Standard 22B6		
Principles and application of ethics and professionalism to address ongoing professional career development.		

Standard 22B Matrix (HTL)	Page 2 / 2	
Histotechnologist	**Course**	**Location of Unit Number**
Standard 22B7		
Education techniques and terminology sufficient to train/educate users and providers of laboratory services.		
Standard 22B8		
Knowledge of research design/practice sufficient to evaluate published studies as an informed consumer.		
Standard 22B9		
Concepts and principles of laboratory operations include:		
Fixation		
Frozen Sectioning		
Processing		
Decalcification		
Embedding		
Microtomy		
Routine and special stains		
Instrumentation		
Tissue identification and microscopy		
Accessioning		
Laboratory Mathematics		
Immunohistochemistry, including enzyme pretreatment		
Laboratory safety		
Human Resource Management to include position description, performance evaluation, utilization of personnel, and analysis of workflow and staffing patterns		
Financial management: profit and loss; cost/benefit, reimbursement requirements, materials/inventory management		
Education methodologies		

Standard 22B Matrix (PathA)		
Pathologists' Assistant	**Course**	**Location or Unit Number**
Standard 22B: Prerequisite coursework		
General chemistry		
Organic chemistry and/or biochemistry		
Biological science		
Microbiology		
Mathematics		
English composition		
Standard 22B: Professional Sequence Courses – knowledge and skills in the following areas		
Anatomic Pathology Management		
Gross Autopsy Pathology Techniques		
Gross Forensic Pathology/Toxicology Specimen Techniques		
Gross Pediatric Pathology Techniques		
Gross Surgical Pathology Techniques		
Educational Methodology		
Standard 22B: Required Cognates – knowledge and skills in the following areas		
Clinical Pathology		
Computerization and Information Systems		
Embryology		
General and Systemic Human Pathology		
Histology/Microscopic Anatomy		
Human Anatomy		
Human Physiology		
Medical Ethics		
Medical Microbiology		
Medical Photography		
Medical Terminology		
Safety Regulations		

Standard 22C - Narrative: Briefly describe how the required material and activities listed in Standard 22B are used in the program to develop entry-level competencies.

If applicable, describe how student experiences at different clinical sites are ensured as comparable.

Justify learning experiences during hours other than the normally scheduled clinical experience.

Describe how policies and procedures regarding service work are distributed to students and clinical facilities.

Standard 22C - Documentation:

Submit a brief summary of the types of laboratory tests performed in each clinical area.

Submit objectives and evaluation instruments for any learning experiences during hours other than the normally scheduled clinical experience.

Submit policies and procedures explaining when students may perform service work.

Attach appropriate documentation in boxes above

Attach appropriate documentation in boxes below

Standard 22D - Narrative: *Narrative Not Required.*

Standard 22D - Documentation:

Submit the criteria for passing, failing and progression in the program.

Indicate when the criteria for passing, failing and progression in the program are given to students

Submit evaluation systems for ONE SAMPLE UNIT OF INSTRUCTION. Evaluation systems must correlate with objectives and competencies submitted for Standard 22A.

Indicate the frequency of student evaluation in lectures and student and/or clinical laboratories.