

## Site Visit Report

Name of Program:	
City, State:	
Program Number:	
Dates Visited:	
Clinical Affiliates Visited:	
Name of Team Chair: (Print)	
Signature of Team Chair*:	
Name of Team Member: (Print)	
Signature of Team Member*:	

*\*By signing the completed site visit report, the site visit team agrees and confirms the validity and completeness of this report, based on the completed site visit. If either the team chair or team member is in disagreement regarding the completeness/content of this site visit report, signature should be withheld and the JRC-DMS office notified.*

JRC-DMS 6021 University Blvd. Suite 500, Ellicott City, MD 21043  
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[Mail@JRCDMS.org](mailto:Mail@JRCDMS.org) / [www.jrcdms.org](http://www.jrcdms.org)

## INSTRUCTIONS FOR USE

This Site Visit Report has been designed by JRC-DMS for report consistency and standardization in the evaluation of diagnostic medical sonography programs. Please utilize this instrument during the site visit. A separate narrative is not required unless the team believes exceptional findings necessitate additional explanation.

The program director may be provided with this instrument to provide familiarity with the evaluation procedure. It is recommended that the program provide blank copies of the Site Visit Report to attendees of the exit summation to aid in understanding the site visit team's findings.

**The primary function of the site visit team is to gather information and report findings.** It is the responsibility of the JRC-DMS to determine, on the basis of the application, Self-Study Report, and team findings, the extent and degree of sponsor/program compliance with the *Standards*. **The site visit team is present only to substantiate information submitted by the program.**

As the site visit proceeds, each criterion appropriate to program operation will be evaluated. The site visit team will check the line that describes the degree of compliance. For any criterion checked "**NO**," the team must provide findings and substantiation, since this assessment represents a potential deficiency in program compliance with the *Standards*. Each item reviewed in connection with substantiation will be checked off on the report form by the team.

The following definitions and examples may assist the site visit team in determining the degree of compliance:

YES – Conforming or agreeing with the *Standards*. The program satisfies the evaluation criterion.

\*NO – Not conforming or agreeing with the *Standards*. The program does not satisfy the evaluation criterion.

Standard: II.B.1.b. – Program Director Qualifications:  
The program director must possess, at a minimum, the following:  
(1) proficiency in curriculum development;  
(2) appropriate credential(s) specific to the concentration(s) offered;  
(3) the equivalent of two years full-time clinical experience as a general sonographer, cardiac sonographer, and/or vascular technologist; and  
(4) an academic degree, not lower than an associates degree, and at least equal to that for which the students in the program are being prepared.

Finding: The program is seeking accreditation for the vascular concentration. The program director is the only faculty member and is not appropriately credentialed for the vascular concentration.

The Site Visit Report must be signed by each team member and submitted by the team chair to the JRC-DMS Executive Office. An accompanying narrative is not required. The team members meet privately prior to the exit summation to ascertain team agreement on all the findings. The exit summation must reflect team findings and relate only to the *Standards*.

**A typewritten report is requested.** A blank copy of this site visit report is available at [www.jrcdms.org](http://www.jrcdms.org) or by contacting the JRC-DMS office at [Mail@JRCdms.org](mailto:Mail@JRCdms.org).

## I. Sponsorship

### I.A.1. Sponsoring Institution

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

1. A post-secondary academic institution accredited by an institutional accrediting agency that is recognized by the U.S. Department of Education, and authorized under applicable law or other acceptable authority to provide a post-secondary program which awards a minimum of a certificate at the completion of the program.
2. A hospital or medical center or branch of the United States Armed Forces, or other governmental educational or medical service that meets post-secondary educational institutional accreditation-equivalent standards.

**Site visitor complete:**

*Is the program in compliance with this Standard?*

Yes

No\*

Substantiated  
by:

Credentialing Results

Interviews

Policies / Competencies

Other:

*Findings and Substantiation for No\*:*

### I.B. Consortium Sponsor

1. A consortium sponsor is an entity consisting of two or more members that exists for the purpose of operating an educational program. In such instances, at least one of the members of the consortium must meet the requirements of a sponsoring educational institution as described in I.A.
2. The responsibilities of each member of the consortium must be clearly documented as a formal affiliation agreement or memorandum of understanding, which includes governance and lines of authority.

**Site visitor complete:**

*Is the program in compliance with this Standard?*

Yes

No\*

Substantiated  
by:

Credentialing Results

Interviews

Policies / Competencies

Other:

*Findings and Substantiation for No\*:*

### I.C. Responsibilities of Sponsor

The Sponsor must assure that the provisions of these *Standards* are met.

**Site visitor complete:**

*Is the program in compliance with this Standard?*

Yes

No\*

Substantiated  
by:

Credentialing Results

Interviews

Policies / Competencies

Other:

*Findings and Substantiation for No\*:*

## II. Program Goals

### II.A. Program Goals and Outcomes

There must be a written statement of the program's goals and learning domains (cognitive, psychomotor, affective) consistent with and responsive to the demonstrated needs and expectations of the various communities of interest served by the educational program. The communities of interest that are served by the program include, but are not limited to, students, graduates, faculty, sponsor administration, employers, physicians, the public, and nationally accepted standards of roles and functions.

Program-specific statements of goals and learning domains provide the basis for program planning, implementation, and evaluation. Such goals and learning domains must be compatible with both the mission of the sponsoring institution(s) and the expectations of the communities of interest. Goals and learning domains are based upon the substantiated needs of health care providers and employers, and the educational needs of the students served by the educational program.

**Site visitor complete:**

*Is the program in compliance with this Standard?*

Yes

No\*

Substantiated  
by:

Credentialing Results

Interviews

Policies / Competencies

Other:

*Findings and Substantiation for No\*:*

## II.B. Appropriateness of Goals and Learning Domains

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

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

*Site visitor complete:*

*Is the program in compliance with this Standard?*

Yes  No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

*Findings and Substantiation for No\*:*

## II.C. Minimum Expectations

The program must have the following goal(s) defining minimum expectations: "To prepare competent entry-level general sonographers in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains" and/or "To prepare competent entry-level cardiac sonographers in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains" and/or "To prepare competent entry-level vascular technologists in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains."

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

*Site visitor complete:*

*Is the program in compliance with this Standard?*

Yes  No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

*Findings and Substantiation for No\*:*

## III. Resources

### III.A. Type and Amount

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

*Site visitor complete:*

*Is the program in compliance with this Standard?*

Yes  No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

*Findings and Substantiation for No\*:*

### III.B. Personnel

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

*Site visitor complete:*

*Is the program in compliance with this Standard?*

Yes  No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

*Findings and Substantiation for No\*:*

#### III.B.1. Program Director

##### III.B.1.a. Program Director Responsibilities

The program director must be responsible for the structure as well as the daily operation of the program, including organization, administration, periodic review and evaluation, continued development, and

general effectiveness of program curricula. The program director ensures a schedule of regular visits to all clinical affiliates/clinical education centers is maintained. The responsibilities of the program director must not be adversely affected by educationally unrelated functions.

**Site visitor complete:**

**Is the program in compliance with this Standard?**  Yes  No\*  
 Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

### III.B.1.b. Program Director Qualifications

The program director must possess, at a minimum, the following:

- (1) proficiency in curriculum development;
- (2) appropriate credential(s) specific to the concentration(s) offered;
- (3) the equivalent of two years full-time clinical experience as a general sonographer, cardiac sonographer, and/or vascular technologist; and
- (4) an academic degree, not lower than an associates degree, and at least equal to that for which the students in the program are being prepared.

**Site visitor complete:**

**Is the program in compliance with this Standard?**  Yes  No\*  
 Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

### III.B.2. Clinical Coordinator(s)

Programs with eight or more clinical affiliates / clinical education centers must have an additional faculty member designated as the clinical coordinator. For programs with fewer than eight clinical affiliates/clinical education centers that do not have an additional faculty member designated as the clinical coordinator, the Program Director must have the qualifications and fulfill the responsibilities of the Clinical Coordinator.

**Site visitor complete:**

**Is the program in compliance with this Standard?**  Yes  No\*  
 Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

### III.B.2.a. Clinical Coordinator(s) Responsibilities

The clinical coordinator(s) must be responsible for coordinating clinical education with didactic education as assigned by the program director. Clinical education effectiveness must be evaluated and ensured through a schedule of regular visits to the clinical affiliate/clinical education centers. The clinical coordinator's responsibilities must include coordination, instruction, and evaluation. The responsibilities of the clinical coordinator must not be adversely affected by educationally unrelated functions.

**Site visitor complete:**

**Is the program in compliance with this Standard?**  Yes  No\*  
 Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

### III.B.2.b. Clinical Coordinator(s) Qualifications

The clinical coordinator(s) must possess, at a minimum, the following:

- (1) proficiency in teaching methodology, supervision, instruction, evaluation, and guidance;
- (2) appropriate credential(s) specific to the concentrations offered; and
- (3) the equivalent of two years full-time professional experience as a general sonographer, cardiac sonographer and/or vascular technologist. Full-time is defined as 35 hours per week.

**Site visitor complete:**

*Is the program in compliance with this Standard?*

Yes

No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

*Findings and Substantiation for No\*:*

### III.B.3. Medical Advisor

#### III.B.3.a. Medical Advisor Responsibilities

The medical advisor must provide guidance that the medical components of the didactic and clinical curriculum meet current acceptable performance standards.

**Site visitor complete:**

*Is the program in compliance with this Standard?*

Yes

No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

*Findings and Substantiation for No\*:*

#### III.B.3.b. Medical Advisor Qualifications

The medical advisor must be a United States licensed physician, Board certified in a medical specialty related to at least one of the learning concentrations offered by the program.

**Site visitor complete:**

*Is the program in compliance with this Standard?*

Yes

No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

*Findings and Substantiation for No\*:*

### III.B.4. Faculty and Instructional Staff

If the key personnel do not have all of the appropriate credentials for the learning concentrations offered, then there must be another faculty member with the appropriate credentials who will assume the didactic instruction and clinical evaluation responsibilities specific to that concentration.

All faculty must be familiar with program goals, be able to demonstrate the ability to develop an organized plan of instruction and evaluation, and have appropriate credentials for the learning areas they teach.

**Site visitor complete:**

*Is the program in compliance with this Standard?*

Yes

No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

*Findings and Substantiation for No\*:*

#### III.B.4.a. Didactic Instructor(s)

##### III.B.4.a.(1) Didactic Instructor(s) Responsibilities

The instructional staff must be responsible for providing didactic content, evaluating students, reporting progress, and for the periodic review and updating of course material.

**Site visitor complete:**

*Is the program in compliance with this Standard?*

Yes

No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

*Findings and Substantiation for No\*:*

### III.B.4.a.(2) Didactic Instructor(s) Qualifications

The instructors must be individually qualified by education and experience, and be effective in teaching the subjects assigned.

*Site visitor complete:*

*Is the program in compliance with this Standard?*  Yes  No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

*Findings and Substantiation for No\*:*

### III.B.4.b. Clinical Instructor(s)

A clinical instructor must be identified for each clinical affiliate/clinical education center.

*Site visitor complete:*

*Is the program in compliance with this Standard?*  Yes  No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

*Findings and Substantiation for No\*:*

### III.B.4.b.(1) Clinical Instructor(s) Responsibilities

A clinical instructor must be available to students whenever he or she is assigned to a clinical setting, provide appropriate clinical supervision, and be responsible for student clinical evaluation. The program must provide a position description for a clinical instructor to carry out educational responsibilities.

*Site visitor complete:*

*Is the program in compliance with this Standard?*  Yes  No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

*Findings and Substantiation for No\*:*

### III.B.4.b.(2) Clinical Instructor(s) Qualifications

Clinical instructors must have the appropriate credential for the concentration they are teaching.

*Site visitor complete:*

*Is the program in compliance with this Standard?*  Yes  No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

*Findings and Substantiation for No\*:*

### III.C. Curriculum

The curriculum must ensure the achievement of program goals and learning domains. Instruction must be an appropriate sequence of classroom, laboratory, and clinical activities. Instruction must be based on clearly written course syllabi describing learning goals, course objectives, and competencies required for graduation.

*Site visitor complete:*

*Is the program in compliance with this Standard?*  Yes  No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

*Findings and Substantiation for No\*:*

### III.C.1. Curriculum Requisites

The following curriculum requisites must be met prior to the beginning of the core curriculum of the diagnostic medical sonography education program; they must be included in college level courses:

- a. Algebra, statistics, or higher mathematics course
- b. General college-level physics and/or radiographic physics
- c. Communication skills and
- d. Human anatomy and physiology

The following curriculum requisites must either be met prior to the diagnostic medical sonography education program or be presented as course work; courses may be presented within a course at the

college level and must include the following:

- e. Patient care
- f. Medical ethics and law
- g. Medical terminology and
- h. Pathophysiology

*Site visitor complete:*

*Is the program in compliance with this Standard?*

Yes

No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

*Findings and Substantiation for No\*:*

### III.C.2. Master Plan

The master plan of education must be sufficiently detailed to provide for continuity, delivery, and ongoing evaluation of the program in the event of staff changes. The master plan of education must be available for review.

*Site visitor complete:*

*Is the program in compliance with this Standard?*

Yes

No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

*Findings and Substantiation for No\*:*

### III.C.3. Learning Competencies Common to Each Concentration

***The minimum competency offered by the program must include the following:***

III.C.3.a. Utilize oral and written communication.

(1) Maintain clinical records;

(2) Interact with the interpreting physician or other designated physicians with oral or written summary of findings as permitted by employer policy and procedure

(3) Recognize significant clinical information and historical facts from the patient and the medical records, which may impact the diagnostic examination;

(4) Comprehend and employ appropriate medical terminology, abbreviations, symbols, terms, and phrases; and

(5) Educate other health care providers and the public in the appropriate applications of ultrasound and other diagnostic vascular evaluation, including the following:

Medical terminology

Sonographic/other vascular terminology

Pertinent clinical signs, symptoms, and laboratory tests

Pertinent legal principles

*Site visitor complete:*

*Is the program in compliance with this Standard?*

Yes

No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

*Findings and Substantiation for No\*:*

III.C.3.b. Provide basic patient care and comfort.

- (1) Maintain infection control and utilize standard precautions;
- (2) Anticipate and be able to respond to the needs of the patient; and
- (3) Identify life-threatening situations and implement emergency care as permitted by employer procedure, including the following:
  - Pertinent patient care procedures
  - Principles of psychological support
  - Emergency conditions and procedures
  - First aid and resuscitation techniques
- (4) Proper patient positioning

**Site visitor complete:**

*Is the program in compliance with this Standard?*  Yes  No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

*Findings and Substantiation for No\*:*

III.C.3.c. Demonstrate knowledge and understanding of human gross anatomy and sectional anatomy.

- (1) Evaluate anatomic structures in the region of interest; and
- (2) Recognize the sonographic appearance of normal tissue structures, including the following:
  - Sectional anatomy
  - Embryology
  - Normal sonographic patterns

**Site visitor complete:**

*Is the program in compliance with this Standard?*  Yes  No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

*Findings and Substantiation for No\*:*

III.C.3.d. Demonstrate knowledge and understanding of physiology, pathology, and pathophysiology.

- (1) Obtain and evaluate pertinent patient history and physical findings;
- (2) Extend standard diagnostic testing protocol as required by patient history or initial findings;
- (3) Review data from current and previous examinations to produce a written/oral summary of technical findings, including relevant interval changes, for the interpreting physician's reference and
- (4) Recognize examination findings that require immediate clinical response and notify the interpreting physician of such findings, including the following:
  - Patient interview and examination techniques
  - Chart and referral evaluation
  - Diagnostic testing protocols related to specific disease conditions
  - Physiology including blood flow dynamics
  - Pertinent pathology and pathophysiology
  - Pertinent legal issues

**Site visitor complete:**

*Is the program in compliance with this Standard?*  Yes  No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

*Findings and Substantiation for No\*:*

III.C.3.e. Demonstrate knowledge and understanding of acoustic physics, Doppler ultrasound principles, and ultrasound instrumentation.

- (1) Select the appropriate technique(s) for examination(s) being performed;
- (2) Adjust instrument controls to optimize image quality;
- (3) Perform linear, area, circumference, and other related measurements from sonographic images or data;
- (4) Recognize and compensate for acoustical artifacts

- (5) Utilize appropriate devices to obtain pertinent documentation
- (6) Minimize patient exposure to acoustic energy
- (7) Apply basic concepts of acoustic physics which include the following:
  - Sound production and propagation
  - Interaction of sound and matter
  - Instrument options and transducer selection
  - Principles of ultrasound instruments and modes of operation
  - Operator control options
  - Physics of Doppler
  - Principles of Doppler techniques
  - Methods of Doppler flow analysis
  - Recording techniques
  - Acoustic artifacts
- (8) Emerging Technologies

**Site visitor complete:**

*Is the program in compliance with this Standard?*       Yes       No\*

Substantiated by:       Credentialing Results       Interviews       Policies / Competencies       Other:

*Findings and Substantiation for No\*:*

- III.C.3.f. Demonstrate knowledge and understanding of the interaction between ultrasound and tissue and the probability of biological effects in clinical examinations, including the following:
- Biologic effects
  - Pertinent in-vitro and in-vivo studies
  - Exposure display indices
  - Generally accepted maximum safe exposure levels
  - ALARA principle

**Site visitor complete:**

*Is the program in compliance with this Standard?*       Yes       No\*

Substantiated by:       Credentialing Results       Interviews       Policies / Competencies       Other:

*Findings and Substantiation for No\*:*

- III.C.3.g. Employ professional judgment and discretion.
- (1) Protect the patient's right to privacy based on current federal standards and regulations;
  - (2) Maintain confidentiality; and
  - (3) Adhere to the professional codes of conduct/ethics through the following:
    - Medical ethics
    - Pertinent legal principles
    - Professional interaction skills
    - Professional scopes of practice

**Site visitor complete:**

*Is the program in compliance with this Standard?*       Yes       No\*

Substantiated by:       Credentialing Results       Interviews       Policies / Competencies       Other:

*Findings and Substantiation for No\*:*

- III.C.3.h. Understand the fundamental elements for implementing a quality assurance and improvement program, and the policies, protocols, and procedures for the general function of the ultrasound laboratory, including the following:
- Administrative procedures
  - Quality control procedures
  - Elements of quality assurance program
  - Records maintenance
  - Personnel and fiscal management
  - Trends in health care systems

**Site visitor complete:**

**Is the program in compliance with this Standard?**  Yes  No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

III.C.3.i. Recognize the importance of continuing education, through the following:

- Professional journals
- Conferences
- Lectures
- In-house educational offerings
- Professional organizations and resources
- Recent developments in sonography
- Research statistics and design

**Site visitor complete:**

**Is the program in compliance with this Standard?**  Yes  No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

III.C.3.j. Recognize the importance of, and employ, ergonomically correct scanning techniques:

- Personal fitness
- Supports, tools, and devices
- Equipment adjustments
- Patient positioning

**Site visitor complete:**

**Is the program in compliance with this Standard?**  Yes  No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

**III.C.4. The General Learning Concentration must include the following:**

Site visit not for the evaluation of the general learning concentration

III.C.4.a. Demonstrate the ability to perform sonographic examinations of the abdomen, superficial structures, non-cardiac chest, and the gravid and nongravid pelvis according to protocol guidelines established by national professional organizations and the protocol of the employing institution utilizing real-time equipment with both transabdominal and endocavitary transducers, and Doppler display modes.

**Site visitor complete:**

**Is the program in compliance with this Standard?**  Yes  No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

III.C.4.b. Recognize and identify the sonographic appearance of normal anatomic structures, including anatomic variants and normal Doppler patterns:

- Liver
- Biliary system
- Pancreas
- Urinary tract
- Adrenal glands
- Spleen
- Prevertebral vessels
- Peritoneal cavity, including potential spaces
- Gastrointestinal tract
- Noncardiac chest

Neck  
Breast  
Scrotum  
Prostate  
Anterior abdominal wall  
Extremities  
Brain and spinal cord  
Musculoskeletal

**Site visitor complete:**  
**Is the program in compliance with this Standard?**  Yes  No\*  
Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:  
**Findings and Substantiation for No\*:**

IIIC.4.c. Recognize, identify, and appropriately document the abnormal sonographic and Doppler patterns of disease processes, pathology, and pathophysiology of the structures listed in III.C.4.b. Modify the scanning protocol based on the sonographic findings and the differential diagnosis:  
History and physical examination  
Related imaging, laboratory, and functional testing procedures  
Clinical differential diagnosis  
Role of ultrasound in patient management

Sonographic and Doppler patterns in clinical diseases that may occur in the following categories:  
Iatrogenic  
Degenerative  
Inflammatory  
Traumatic  
Neoplastic  
Infectious  
Obstructive  
Congenital  
Metabolic  
Immunologic

**Site visitor complete:**  
**Is the program in compliance with this Standard?**  Yes  No\*  
Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:  
**Findings and Substantiation for No\*:**

III.C.4.d. Recognize and identify the sonographic appearance of normal anatomic structures of the female pelvis, including anatomic variants and normal Doppler patterns:  
Reproductive system  
Pelvic muscles  
Suspensory ligaments  
Peritoneal spaces  
Pelvic vasculature

**Site visitor complete:**  
**Is the program in compliance with this Standard?**  Yes  No\*  
Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:  
**Findings and Substantiation for No\*:**

III.C.4.e. Recognize and identify the sonographic appearance of normal maternal, embryonic, and fetal anatomic structures during the first, second, and third trimesters:  
Sectional anatomy  
Pertinent measurement techniques  
Doppler applications

**Site visitor complete:**

**Is the program in compliance with this Standard?**  Yes  No\*

Substantiated  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

III.C.4.f. Recognize, identify, and appropriately document the sonographic appearance of gynecologic disease processes, pathology, and pathophysiology:

- History and physical examination
- Related imaging, laboratory, and functional testing procedures
- Differential diagnosis
- Role of ultrasound in patient management

Abnormal sonographic patterns:

- Iatrogenic
- Degenerative
- Inflammatory
- Traumatic
- Neoplastic
- Infectious
- Obstructive
- Congenital
- Metabolic
- Immunologic
- Contraceptive devices
- Infertility procedures
- Doppler applications

**Site visitor complete:**

**Is the program in compliance with this Standard?**  Yes  No\*

Substantiated  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

III.C.4.g. Recognize, identify, and appropriately document the sonographic appearance of obstetric abnormalities, disease, pathology, and pathophysiology:

- History and physical examination
- Related imaging, laboratory, and functional testing procedures
- Differential diagnosis
- Role of ultrasound in patient management
- Use of three-dimensional obstetric sonography
- Abnormal sonographic characteristics in pregnancy:

- Placenta
- Congenital/genetic anomalies
- Growth abnormalities
- Amniotic fluid
- Viability
- Multiple gestation
- Fetal monitoring
- Maternal factors
- Postpartum
- Fetal therapy

**Site visitor complete:**

**Is the program in compliance with this Standard?**

Yes

No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

III.C.4.h. Demonstrate knowledge and understanding of the role of the sonographer in performing interventional/invasive procedures.

**Site visitor complete:**

**Is the program in compliance with this Standard?**

Yes

No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

III.C.5. The Cardiac Learning Concentration must include the following:

Site visit not for the evaluation of the cardiac learning concentration

III.C.5.a. Demonstrate knowledge of normal and abnormal cardiac anatomy:

Embryology and fetal cardiac development

Cardiac chambers and septation

Valve anatomy and dynamics

Coronary artery anatomy

Relationships of cardiac chambers and great vessels

**Site visitor complete:**

**Is the program in compliance with this Standard?**

Yes

No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

III.C.5.b. Demonstrate knowledge of normal cardiovascular physiology:

Hemodynamics

Ventricular function, including influence of loading conditions and measurement of cardiac output

Exercise physiology

Electrophysiology and conduction system

Pulmonary vascular disease

**Site visitor complete:**

**Is the program in compliance with this Standard?**

Yes

No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

III.C.5.c. Demonstrate knowledge and understanding of cardiac pathology, pathophysiology, and hemodynamics in different types of cardiac disease:

Valvular heart disease

Ischemic cardiac disease

Cardiomyopathy

Pericardial disease

Congenital heart disease

Cardiac neoplasms and masses

Cardiac trauma

Pulmonary vascular disease

Diseases of the aorta and great vessels

**Site visitor complete:**

**Is the program in compliance with this Standard?**  Yes  No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

III.C.5.d. Demonstrate knowledge and understanding of clinical cardiology:

Relationship of echocardiography to history and physical examination (including indications for echocardiography)

Differential diagnosis as it relates to the echocardiographic examination

Cardiovascular surgery and interventional cardiology

Effect of systemic diseases on cardiovascular anatomy and physiology

**Site visitor complete:**

**Is the program in compliance with this Standard?**  Yes  No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

III.C.5.e. Demonstrate knowledge of other cardiac procedures emphasizing indications, utility, and limitations of these procedures:

Angiography and cardiac catheterization

Electrocardiography, electrophysiologic studies, Holter monitoring

Stress testing

Radionuclide studies

Other tomographic imaging procedures

Phonocardiography and external pulse recording

**Site visitor complete:**

**Is the program in compliance with this Standard?**  Yes  No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

III.C.5.f. Demonstrate proficiency in the performance of M-mode, two-dimensional, and Doppler (pulsed wave, continuous wave, color flow and power) echocardiographic studies.

**Site visitor complete:**

**Is the program in compliance with this Standard?**  Yes  No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

III.C.5.g. Recognize, identify, and appropriately document the abnormal echocardiographic and Doppler patterns of disease, pathology, and pathophysiology for the disease categories listed

**Site visitor complete:**

**Is the program in compliance with this Standard?**  Yes  No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

III.C.5.h. Demonstrate knowledge and understanding of the indications, utility, limitations, and technical procedures for related echocardiographic studies:

Stress echocardiography

Transesophageal echocardiography

Intraoperative echocardiography

Contrast echocardiography

Three-dimensional echocardiography

Echo-guided procedures

**Site visitor complete:**

**Is the program in compliance with this Standard?**

Yes

No\*

Substantiated  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

III.C.5.i. Demonstrate knowledge and understanding of clinical pharmacology as it relates to echocardiography and provocative maneuvers:

Cardiovascular pharmacology

Theory and use of provocative stress agents

Non-pharmacologic stress

Potential effects of cardiac medications on echocardiographic findings

**Site visitor complete:**

**Is the program in compliance with this Standard?**

Yes

No\*

Substantiated  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

III.C.5.j. Demonstrate knowledge, understanding, and proficiency in the use of quantitation principles applied to echocardiographic images and flow data:

Standard M-mode, two-dimensional, and Doppler measurements and calculations

Knowledge and understanding of normal and abnormal values for M-mode, two-dimensional and Doppler echocardiography

Evaluation of normal and abnormal ventricular function

Evaluation of the severity of valve stenosis and regurgitation

Knowledge of normal and abnormal cardiovascular hemodynamics and flow patterns

**Site visitor complete:**

**Is the program in compliance with this Standard?**

Yes

No\*

Substantiated  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

III.C.6. The Vascular Learning Concentration must include the following:

*Site visit not for the evaluation of the vascular learning concentration*

III.C.6.a. Demonstrate knowledge of normal and abnormal vascular anatomy:

Extremity Arterial (upper and lower)

Extremity Venous (upper and lower)

Cerebrovascular: extracranial and intracranial

Abdominal Vasculature: arterial and venous

Special circulations: arterial and venous

**Site visitor complete:**

**Is the program in compliance with this Standard?**

Yes

No\*

Substantiated  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

III.C.6.b. Demonstrate knowledge of normal and abnormal vascular physiology;

Normal and Abnormal Arterial and Venous Hemodynamics: Flow physics

Exercise physiology

Effects of collateralization on Hemodynamics

**Site visitor complete:**

**Is the program in compliance with this Standard?**

Yes

No\*

Substantiated  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

III.C.6.c. Demonstrate knowledge and understanding of vascular physiology, pathophysiology, and

hemodynamics in the different types of vascular disease/dysfunction:

- Iatrogenic
- Degenerative
- Inflammatory
- Traumatic
- Neoplastic
- Infectious
- Obstructive
- Congenital
- Metabolic
- Immunologic

Flow changes secondary to other states, e.g., cardiac diseases, pulmonary diseases, pregnancy, inflammatory diseases, intracranial and extracranial disease, anemia  
Pharmacology

**Site visitor complete:**

**Is the program in compliance with this Standard?**     Yes     No\*

Substantiated by:     Credentialing Results     Interviews     Policies / Competencies     Other:

**Findings and Substantiation for No\*:**

III.C.6.d. Demonstrate knowledge and understanding of clinical vascular diagnostic procedures:

- Relationship of vascular diagnostic techniques to patient history and physical examination
- Knowledge of appropriate indications for vascular examination
- Differential diagnosis as it relates to vascular testing and examination

Vascular surgery and interventional vascular procedures including intravascular ultrasound, angiography, transluminal angioplasty with and without stenting, atherectomy, endarterectomy, patch graft endarterectomy, vein and synthetic vascular bypass procedures as well as embolectomy and thrombectomy, radio-frequency and laser vein ablation, endovascular repair

**Site visitor complete:**

**Is the program in compliance with this Standard?**     Yes     No\*

Substantiated by:     Credentialing Results     Interviews     Policies / Competencies     Other:

**Findings and Substantiation for No\*:**

III.C.6.e. Demonstrate knowledge of other vascular procedures emphasizing indications, utility, and limitations of these procedures:

- Angiography
- Venography
- Magnetic resonance angiogram
- Magnetic resonance flow meters
- Computed tomography
- Nuclear medicine vascular procedures

**Site visitor complete:**

**Is the program in compliance with this Standard?**     Yes     No\*

Substantiated by:     Credentialing Results     Interviews     Policies / Competencies     Other:

**Findings and Substantiation for No\*:**

III.C.6.f. Knowledge of importance and impact of other laboratory values and invasive and non-invasive testing/imaging modalities.

**Site visitor complete:**

**Is the program in compliance with this Standard?**  Yes  No\*

Substantiated  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

III.C.6.g. Demonstrate proficiency in the performance of physiologic testing (including volume pulse recording, pressure measurements, plethysmography, and stress testing), real-time ultrasound imaging, and Doppler evaluation (pulsed and continuous wave, color and power flow) as relates to the vasculature. Vascular testing proficiency must be demonstrated in the following areas:

- Extracranial Cerebrovascular
- Intracranial Cerebrovascular (transcranial Doppler)
- Extremity Arterial (upper and lower)
- Extremity Venous (upper and lower)
- Visceral Vascular (renal artery, mesenteric/splanchnic, hepatoportal)

**Site visitor complete:**

**Is the program in compliance with this Standard?**  Yes  No\*

Substantiated  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

III.C.6.h. Demonstrate knowledge and understanding of clinical pharmacology as it relates to vascular evaluation and stress testing:

- Vasoactive relationships
- Potential effects of medications on vascular diagnostic findings

**Site visitor complete:**

**Is the program in compliance with this Standard?**  Yes  No\*

Substantiated  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

III.C.6.i. Demonstrate knowledge, understanding, and proficiency in the use of quantitative principles applied to vascular testing:

- Ankle/brachial pressure ratios
- Segmental pressures
- Aorta/renal ratios
- Resistive index
- Pulsatility index
- Internal carotid artery to common carotid artery ratio
- Percentage velocity change across stenosis for grading arterial lesions
- Area and diameter reduction measurements
- Knowledge of normal and abnormal vascular flow patterns and waveform morphology

**Site visitor complete:**

**Is the program in compliance with this Standard?**  Yes  No\*

Substantiated  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

### III.D. Resource Assessment

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

**Site visitor complete:**

**Is the program in compliance with this Standard?**  Yes  No\*

Substantiated  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

## IV. Student and Graduate (Outcomes) Evaluation/Assessment

### IV.A. Student Evaluation

#### IV.A.1. Frequency and purpose

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

**Site visitor complete:**

**Is the program in compliance with this Standard?**  Yes  No\*

Substantiated  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

#### IV.A.2. Documentation

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

Records indicating the number and type of procedures performed by the student, the examination findings, the extent of student supervision, and the level of involvement of the student in scanning/performance must be maintained and must document that all students meet the minimum numbers of procedures and types of procedures established by the program.

**Site visitor complete:**

**Is the program in compliance with this Standard?**  Yes  No\*

Substantiated  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

### IV.B. Outcomes

#### IV.B.1. Outcomes Assessment

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

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

Site visitor complete:

Is the program in compliance with this Standard?

Yes

No\*

Substantiated  Credentialing Results  Interviews  Policies / Competencies  Other:

Findings and Substantiation for No\*:

#### IV.B.2. Outcomes Reporting

The program must periodically submit its goal(s), learning domains, evaluation systems (including type, cut score, validity, and reliability), outcomes, its analysis of the outcomes and an appropriate action plan based on the analysis.

Site visitor complete:

Is the program in compliance with this Standard?

Yes

No\*

Substantiated  Credentialing Results  Interviews  Policies / Competencies  Other:

Findings and Substantiation for No\*:

### V. Fair Practices

#### V.A. Publications and Disclosure

V.A.1. Announcements, catalogs, publications, and advertising must accurately reflect the program offered.

Site visitor complete:

Is the program in compliance with this Standard?

Yes

No\*

Substantiated  Credentialing Results  Interviews  Policies / Competencies  Other:

Findings and Substantiation for No\*:

V.A.2. At least the following must be made known to all applicants and students: the sponsor's institutional and programmatic accreditation status as well as the name, address and phone number of the accrediting agencies; admissions policies and practices; policies on advanced placement, transfer of credits, and credits for experiential learning; number of credits required for completion of the program; tuition/fees and other costs required to complete the program; policies and processes for withdrawal and for refunds of tuition/fees.

Site visitor complete:

Is the program in compliance with this Standard?

Yes

No\*

Substantiated  Credentialing Results  Interviews  Policies / Competencies  Other:

Findings and Substantiation for No\*:

V.A.3. At least the following must be made known to all students: academic calendar, student grievance procedure, criteria for successful completion of each segment of the curriculum and graduation, policies for student leave of absence, exposure to blood borne pathogens, communicable diseases, and pregnancy, and policies and processes by which students may perform clinical work while enrolled in the program.

**Site visitor complete:**

**Is the program in compliance with this Standard?**

Yes

No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

#### V.B. Lawful and Non-discriminatory Practices

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

**Site visitor complete:**

**Is the program in compliance with this Standard?**

Yes

No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

#### V.C. Safeguards

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

The program must ensure voluntary and prudent use of students or other human subjects for non-clinical scanning. Students' grades and evaluations must not be affected by participation or non-participation.

The combined total didactic/clinical involvement of the student in the program must not exceed 40 hours per week.

**Site visitor complete:**

**Is the program in compliance with this Standard?**

Yes

No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

#### V.D. Student Records

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

**Site visitor complete:**

**Is the program in compliance with this Standard?**

Yes

No\*

Substantiated by:  Credentialing Results  Interviews  Policies / Competencies  Other:

**Findings and Substantiation for No\*:**

#### V.E. Substantive Change

The sponsor must report substantive change(s) as described in Appendix A to CAAHEP/JRC-DMS in a timely manner. Other substantive change(s) to be reported to JRC-DMS within the time limits prescribed include:

1. Changes in affiliates
2. Added or deleted learning concentrations
3. Institution's mission or objectives if these will affect the program
4. Addition of courses that represent a significant departure in content or in method of delivery
5. Degree or credential level
6. Substantial change in clock or credit hours for successful completion of a program or in the length of a program.

**Site visitor complete:**

**Is the program in compliance with this Standard?**

Yes

No\*

Substantiated

Credentialing Results

Interviews

Policies / Competencies

Other:

by:  
**Findings and Substantiation for No\*:**

### V.F. Agreements

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

**Site visitor complete:**

**Is the program in compliance with this Standard?**

Yes

No\*

Substantiated

Credentialing Results

Interviews

Policies / Competencies

Other:

by:  
**Findings and Substantiation for No\*:**

Program Strengths:

Program Deficiencies:

Additional Comments/Notes to the Board Reviewer: