



Association for the
Advancement of
Blood & Biotherapies

INFORMATION TECHNOLOGY

in Blood Banking & Transfusion Services

CERTIFICATE PROGRAM

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Technical Requirements and Contact Information for Assistance

This program is offered entirely online as independent, self-paced study through AABB's Education Platform located at <http://education.aabb.org>.

Technical Requirements - learners must:

- Have an internet connection to access the program.
- Navigate and be able to use the features of the program and Education Platform.

We strongly recommend registered learners use either Google Chrome, Safari, Microsoft Edge, or Firefox browsers to access the program. Anyone using MAC or PC can [download Google Chrome](#). Internet Explorer is not supported.

For questions related to the program including access submit an enquiry via email to the AABB eLearning team at eLearning@aabb.org. A response should be expected Monday – Friday during business hours (US Eastern Standard Time or EST) within 48 hours of request.

Program Description

In today's rapidly changing healthcare environment, it is essential that Information Technology (IT) professionals working at blood banks and transfusion medicine services understand the unique needs and challenges of the field. New and evolving regulatory requirements, changes to reimbursement, introduction of new technologies and products, data exchanges with electronic health record (EHR) systems and supply chain providers, and a growing reliance on data present IT professionals with an integral role to play in supporting their teams and ensuring patient safety and privacy.

Whether you are just entering the workforce or already have experience, the AABB Information Technology in Blood Banking & Transfusion Services Certificate Program is designed to provide a solid foundation to understanding the blood banking and transfusion services field from the unique perspective of an IT professional.

The certificate program comprises 3 modules and select content from the AABB Blood Banking & Transfusion Medicine 101 eCast series:

- **Module 1: Overview of Blood Collection, Manufacturing, and Transfusion** - designed to introduce IT professionals to blood banking concepts, practices, and regulatory governance.
 - **AABB Blood Banking & Transfusion Medicine 101 eCast series: Selected Sessions**
To provide a basic understanding of blood components, selected content from the AABB Blood Banking & Transfusion Medicine 101 eCast series is provided as a precursor to this module and includes:
 - Overview of the Blood Pipeline (*Required*)
 - Ecology of Blood (*Required*)
 - Transfusion Medicine as Applied Immunology (*Required*)
 - Industry Review/Overview: Challenges in this Area (*Required*)
 - Blood Centers 101 (*Required*)
 - Requirements for Storage and Expiration (*Required*)
 - Principles of Blood Supply Safety (*Required*)
 - Directed & Autologous Donors (*Required*)
 - Blood Banking: Global Environment (*Optional*)

- Blood Banking: Challenges in this Area *(Optional)*
 - Blood Products and Indications on Why You Would Transfuse Each *(Optional)*
 - ABO Typing & Antibody Screening/Identification and Cross Matching – Why is This Important *(Optional)*
 - Adverse Effects of Blood Transfusion *(Optional)*
 - Transfusion Medicine: Challenges in this Area *(Optional)*
 - Regulatory/Compliance: Challenges in this Area *(Optional)*
- **Module 2: Blood Establishment Computer Software (BECS)** - introduces the IT professional to Blood Establishment Computer Software (BECS), the Blood Establishment Computer System, and FDA requirements related to software use in a blood establishment.
 - **Module 3: Regulating and Accrediting Authorities in Blood Banking** - introduces IT personnel to regulating and accrediting agencies. While it is not possible to include all agencies, this module includes information regarding authorities with the greatest influence on blood banking policies and practices.

Prerequisites

While there are no prerequisites* for the program, learners are expected to have:

- a working knowledge of computer hardware, computer systems and databases.
- a basic understanding of current Good Manufacturing Practices (cGMP), which is a training requirement for all employees at blood establishments.
- a rudimentary familiarity with blood components: red blood cells, plasma, and platelets (content included with Module 1).
- a basic understanding of quality systems related to software development and a general understanding of software and manufacturing processes used in blood establishments.
- a familiarity with blood banking software and application, user access, and security requirements in a blood banking environment.

*Modules 1 and 2 must be completed before Module 3.

Learning Objectives

Following completion of this program, the learner should be able to meet the learning objectives listed in each module:

Module 1: Overview of Blood Collection, Manufacturing, and Transfusion

Designed to introduce IT professionals to blood banking concepts, practices, and regulatory governance.

Learning Objectives

Upon completion of this module, learners should be able to:

- ✓ Discuss the principles of blood supply safety.
- ✓ List the processes used to collect, manufacture, and transfuse blood products.
- ✓ Identify blood units and blood products using DIN (Donation Identification Number) and ISBT 128 product labels.
- ✓ Discuss the differences between whole blood and apheresis blood products.
- ✓ Describe the importance of accurate donor records.
- ✓ Discuss compliance issues for blood establishment computer software and the related hardware/software environment.

- ✓ Describe the IT professional's role in a blood banking environment.

Module 2: Blood Establishment Computer Software (BECS)

Introduces the IT professional to Blood Establishment Computer Software (BECS), the Blood Establishment Computer System, and FDA requirements related to software use in a blood establishment.

Learning Objectives

Upon completion of this module, learners should be able to:

- ✓ State the FDA's definition of Blood Establishment Computer Software (BECS).
- ✓ Describe intended uses of a BECS and why IT personnel need to understand them.
- ✓ Define the role of the BECS in completing and maintaining process documentation required by the FDA.
- ✓ State the FDA's definition of Blood Establishment Computer System.
- ✓ Describe regulations that affect software used in a blood banks and blood establishment.
- ✓ Discuss the differences between Quality Systems for blood manufacturing and medical device software manufacturing.
- ✓ List data backup requirements for blood manufacturing facilities.

Module 3: Regulating and Accrediting Authorities in Blood Banking

Introduces IT personnel to regulating and accrediting agencies. While it is not possible to include all agencies, this module includes information regarding authorities with the greatest influence on blood banking policies and practices.

Learning Objectives

Upon completion of this module, learners should be able to:

- ✓ Discuss the concept of regulation versus accreditation.
- ✓ Describe the roles of government agencies with responsibilities for blood banking and transfusion services.
- ✓ Describe the roles of private organizations that influence blood banking practices through publication of standards and/or credentialing programs.

Program Content Accessibility

The program content is narrated. The volume level can be adjusted by moving the volume icon (visible on the screen), in the preferred direction and/or adjusting your own computer volume controls.

You will be able to advance the slide set or return to those slides you wish to review by selecting the forward or rewind command buttons. We recommend that you first view the material in its intended order for best understanding. You will always be able to return to slides for review as many times as you wish during your access period.

Activities for Successful Completion of the Certificate Program

Read and study all materials for each module. Follow the modules in order as information builds upon preceding lessons. Since this is a self-paced program, learners may decide how much time is needed to review and study the materials. It is estimated that each module will take approximately 2-4 hours to complete. A suggested strategy is to create a study plan or timeline for completing each module and the required Blood Banking & Transfusion Medicine 101 eCast series content. Follow that plan to ensure timely completion within the year that you will have access to the program.

Assessment and Grading To Obtain Certificate

For successful completion of the program resulting in conferral of the IT Certificate:

1. Review the Blood Banking & Transfusion Medicine 101 eCast series required content.
2. When ready to move to the modules, read and carefully study each slide in each module.
3. After each module you will be provided an assessment. Answer all of the assessment questions; scoring 80% or higher. The assessment is a pass/fail exercise where learners will have 2 opportunities to achieve 80% or higher. There is no grade provided for the assessment; rather an opportunity to reinforce your understanding of the content provided in the program. On each assessment:
 - Learners will receive test questions (i.e., multiple choice, true-false questions, fill in the blanks) and asked to select the correct answer.
 - Learners will receive feedback as to whether an answer choice is correct or incorrect.
 - Learners will be provided, after the first attempt, the section in each module to study and/or review to prepare for final attempt for each question.
 - Feedback with the correct answers will be provided after the second and final attempt for each question.
4. Complete the AABB Information Technology in Blood Banking & Transfusion Services Certificate Program Post-Program Evaluation (*Certificate of Completion issued*).
5. Claim continuing education (CE) credit type (*CE certificate issued*).

Continuing Education Credits

This program is eligible for 11 continuing education credits/contact hours for General Participation, California Lab Personnel or Florida Lab Personnel. The number and type of credits awarded for this program was determined by the estimated program completion time. This program is not eligible for continuing education credit for physicians or California Nurses. For more information on each credit type please visit our [Continuing Education Credits webpage](#). A continuing education certificate of completion will be immediately provided to learners upon reviewing all 3 modules (including the required Blood Banking & Transfusion Medicine 101 eCast Series content), successful completion of all 3 module assessments, completion of the program evaluation, and claiming your continuing education credit type.

Program Access

Access to the program in the AABB Education Platform will be available to you for 1 year from the date of registration for the program (immediate access is granted upon registration). This program is self-paced; however, learners must complete all modules, assessments, and a program evaluation within the year to receive the Certificate of Completion. If learners are unable to complete the program within the one-year period and still wish to complete the program, they must either re-purchase the program at full price if your access has been removed or submit a retake form (includes a reduced fee) which will provide an additional 12 months of access and two additional attempts on any failed module assessment(s). Questions related to registration should be directed to eLearning@aabb.org.

Certificate Program Faculty & Contributors

This program has been developed by the AABB Information Systems Committee. While there are

numerous participants that have brought this program to fruition, key faculty include (*titles and affiliations at the time of program development*):

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