



# CPC Handbook

# Contents

<b>NBCRNA Overview</b> .....	<b>4</b>
Vision .....	4
Mission.....	4
History.....	4
Purpose .....	5
Structure .....	5
NCCA Accreditation .....	6
ABSNC Accreditation .....	6
<b>CPC Program Overview</b> .....	<b>7</b>
<b>Categories of CPC Compliance</b> .....	<b>7</b>
Full CPC Compliance.....	7
Conditional (Interim) CPC Compliance .....	7
<b>Requirements for Full CPC Compliance</b> .....	<b>8</b>
First Eight-Year CPC Program Period.....	9
Second Eight-year CPC Program period.....	10
Initially certified on or after January 1, 2024 .....	11
<b>Conditional (Interim) CPC Compliance</b> .....	<b>11</b>
Conditional CPC Compliance Period .....	11
Change in Status .....	11
<b>Examination Overview</b> .....	<b>12</b>
CPC Examination — Performance Standard .....	12
CPC Examination — Passing Standard .....	13
<b>Eligibility Requirements for the CPC Examination</b> .....	<b>13</b>
Significance of Eligibility Status.....	14
Expiration of Eligibility Status.....	15
Ineligibility to Take the CPC Examination .....	15
<b>Grounds for Denial, Suspension or Revocation of Eligibility Status</b> .....	<b>15</b>
<b>Application for CPC Examination</b> .....	<b>16</b>
<b>Application for CPC Compliance</b> .....	<b>17</b>
Process for Each Four-Year CPC Cycle .....	17
<b>CPC-Specific Policies and Procedures</b> .....	<b>19</b>
CPC Compliance Period.....	19

Denial of Reported CPC Program Requirements .....	19
Class A Assessed CE .....	19
Class B Professional Development.....	19
Late Completion of CPC Program or Late Application.....	20
Requesting Additions to Class B Credit Table.....	21
Review Process for Requested Additions to the Class B Table .....	21
2-Year Check-In.....	22
<b>Reasonable Accommodation for Persons with Disabilities.....</b>	<b>23</b>
<b>Initial Certification of New Graduates.....</b>	<b>23</b>
<b>Policies and Procedures for Discipline, Administrative Action and Appeals .....</b>	<b>23</b>
<b>CPC Examination Content Outline.....</b>	<b>24</b>
Domain I: Airway Management (34%) .....	24
Domain II: Applied Clinical Pharmacology (24%) .....	24
Domain III: Human Physiology and Pathophysiology (24%) .....	25
Domain IV: Anesthesia Equipment and Technology (18%) .....	26

*Note: Where used in this Handbook, the phrase “improper behavior” refers to (1) provision of false or incomplete information to the NBCRNA in relation to the credentialing process; (2) violation of any of the rules or regulations governing any NBCRNA examination or assessment; or engaging in any activity which is grounds for disciplinary action as described in the NBCRNA Policies and Procedures for Discipline, Administrative Action and Appeals.*

*This publication contains information about NBCRNA’s Nonsurgical Pain Management Program. Nurse anesthetists are responsible for knowing the contents of this handbook, as well as any additional applicable NBCRNA policies (e.g. please see NBCRNA’s General Information and Policies Handbook).*

*All correspondence and requests for information concerning the NSPM subspecialty credential administered by the NBCRNA should be sent to the NBCRNA at [NSPM@nbcrna.com](mailto:NSPM@nbcrna.com).*

*The NBCRNA does not discriminate on the basis of age, sex, race, religion, national origin, ethnicity, disability, marital status, sexual orientation, and gender identity.*

*NBCRNA primary certification and recertification are accredited by the following organizations:*



# NBCRNA Overview

The National Board of Certification and Recertification for Nurse Anesthetists (NBCRNA) is a not-for-profit corporation organized under the laws of the state of Illinois. NBCRNA credentialing provides assurances to the public that certified individuals have met objective, predetermined qualifications for providing nurse anesthesia services. A nurse anesthetist who is certified by the NBCRNA is expected to: respect basic human rights and the dignity of all patients; protect the patient from harm; advocate for the patient's welfare and collaborate with other members of the health professions; be responsible and accountable for his or her actions; maintain confidentiality of patient information, except when disclosure is required by law; and maintain the knowledge and skill necessary for competent nurse anesthesia practice.

While state licensure provides the legal credential for the practice of professional nursing, private voluntary certification indicates compliance with the professional standards for practice in this clinical nursing specialty. The certification credential for nurse anesthetists has been institutionalized in many position descriptions as a practice requirement or as the standard for demonstrating equivalency. It has been recognized in state nurse practice acts and state rules and regulations.

The primary purpose of the NBCRNA is to seek to ensure that nurse anesthetists have the necessary knowledge and skills to practice safely and effectively. In so doing, it also protects the value of the CRNA credential. The NBCRNA has designed objective criteria intended to determine whether an individual holding the NBCRNA-issued CRNA credential is properly licensed, has attested to engagement in the practice of nurse anesthesia; has participated in continuing education and other activities sufficient to indicate an effort to keep current with advances, and is free of any mental, physical, or other problems that may interfere with the practice of nurse anesthesia. Whenever program eligibility criteria are developed and/or revised, the NBCRNA engages multiple stakeholders to ensure appropriate consideration has been given as to the impact of NBCRNA decisions.

NCCA defines competence as "the ability to perform a task, function, or role at a level that meets or exceeds prescribed standards in the work environment" (NCCA, 2016) and continuing competence as demonstrating "specified levels of knowledge, skills, or ability throughout an individual's professional career" (NCCA, 2016). These concepts serve as the foundation underpinning the NBCRNA certification and continued certification programs.

## Vision

The vision of the NBCRNA is to be recognized as the leader in advanced practice nurse credentialing.

## Mission

The mission of the NBCRNA is to promote patient safety through credentialing programs that support lifelong learning.

## History

The primary certification program for nurse anesthetists was introduced by the American Association of Nurse Anesthetists (AANA) in 1945. It was initially administered by the Credentials Committee of the AANA. In 1975, the AANA approved the establishment of councils for the accreditation and certification processes, and the Council on Certification of Nurse Anesthetists (CCNA) assumed the responsibility for

the National Certification Examination (NCE). By this action, the profession recognized that credentialing mechanisms, which include examination and certification, function to protect and benefit the public.

Realizing that evidence of continued professional excellence was becoming increasingly important in our society, the AANA Board of Directors in 1968 directed the AANA Education Committee to study the issue of recertification. At the AANA Annual Meeting in 1969, a bylaw was adopted to establish an optional program to provide certificates to members who had demonstrated they had completed clinical and didactic experiences reflective of the changes in nurse anesthesia practice within a five-year period. Recognizing that continuing education provides one means to assess current educational and knowledge levels of practitioners, a mandatory continuing education program was adopted by the AANA membership at the 1976 Annual Meeting, with full implementation effective August 1, 1978.

In September 1978, the AANA membership adopted the bylaw revisions providing for an organizational restructuring of the Association and establishing a Council on Recertification of Nurse Anesthetists (COR). Bylaw provisions granting the COR autonomy were adopted in 1983. In 2007, the CCNA and the COR became independent of the AANA, and together they incorporated as the National Board of Certification and Recertification for Nurse Anesthetists (NBCRNA).

With its continued mission to promote patient safety, the NBCRNA implemented the Nonsurgical Pain Management subspecialty certification in 2015 and the Continued Professional Certification (CPC) Program in 2016.

## Purpose

The purpose of the NBCRNA includes, but is not limited to, seeking to ensure that nurse anesthetists have the necessary knowledge and skills to practice safely and effectively. In so doing, it also protects the value of the CRNA credential. The NBCRNA is responsible for:

- Formulating, adopting and confirming compliance of initial and subspecialty certification eligibility requirements for nurse anesthetists
- Formulating, adopting and confirming compliance of recertification and continued professional certification (CPC) eligibility requirements for nurse anesthetists
- Formulating, adopting and confirming compliance of the requirements for eligibility for admission to NBCRNA-administered examinations or assessments including, but not limited to, the SEE, NCE, NSPM exam, and the CPC Assessment
- Formulating, adopting and administering NBCRNA-created examinations or assessments to candidates who have met all requirements for examination or assessment and have been found eligible

No national organization can expect to determine the specific procedures that any individual nurse anesthetist is qualified to perform. Neither can any national organization determine whether an individual nurse anesthetist may have developed an impairment that could interfere with the proper administration of anesthesia. Ultimately, these judgments must be entrusted to the individual nurse anesthetist and to those with whom he or she works.

## Structure

The NBCRNA Board of Directors is composed of nurse anesthetists who hold the NBCRNA-issued CRNA credential and who are actively engaged in clinical practice or in teaching or administration of a nurse

anesthesia educational program; a board-certified surgeon and a board-certified anesthesiologist, both of whom have a current working relationship with nurse anesthetists; and a representative of the public at large.

## **NCCA Accreditation**

The primary certification and recertification programs of the NBCRNA are accredited through April 2022 by the National Commission for Certifying Agencies (NCCA), a private not-for-profit organization. The NCCA is the accrediting branch of the Institute for Credentialing Excellence (ICE), which is the national standard-setting organization for credentialing groups, including certification boards, licensing boards, and associations. The NBCRNA (and before it, the CCNA and COR) has been continuously accredited by the NCCA since 1980.

NCCA accreditation means that the NBCRNA credentialing programs meet the highest national voluntary standards for private certification. It means that the programs have been reviewed by an impartial commission and deemed to have met the nationally accepted criteria and guidelines of the NCCA.

## **ABSNC Accreditation**

The primary certification and recertification programs of the NBCRNA are accredited through July 2022 by the Accreditation Board for Specialty Nursing Certification (ABSNC) of the American Board of Nursing Specialties (ABNS). The NBCRNA (and before it, the CCNA and COR) was one of the first national credentialing organizations to be recognized and accredited by the ABSNC.

The ABNS, established in 1991, is the national peer review program for specialty nursing credentialing organizations. ABNS serves as the national umbrella organization for nursing specialty certification boards authorized and recognized to certify nurse specialists in the United States. It promotes the highest quality of specialty nursing practice through the establishment of standards of professional specialty nursing certification.

# CPC Program Overview

Through the Continued Professional Certification (CPC) program, the NBCRNA seeks to advance the quality of nurse anesthesia care provided to patients. Specifically, it endeavors to ensure that nurse anesthetists are maintaining their skills and keeping current with scientific and technological developments. It also strives to assure that appropriate limitations are placed on those who are known to have developed conditions that might adversely affect their ability to practice nurse anesthesia. The CPC program spans an eight-year period, which is comprised of two four-year compliance cycles. Each four-year cycle has a specific set of requirements.

The new CPC program replaces the former two-year recertification program.

Beyond appropriate licensure and practice requirements, the CPC program consists of four components required to maintain certification and the continued use of the NBCRNA-granted CRNA credential:

- *Class A Continuing Education (CE)* programs are prior-approved educational programs directly related to anesthesia that contain some form of assessment. The assessment should validate the CE activity's stated learning objectives and verify that learning has occurred.
- *Class B Professional Development Activities* are defined as activities that enhance the anesthetist's foundational knowledge of nurse anesthesia practice, support patient safety, or foster the nurse anesthetist's understanding of the broader healthcare environment. A complete list of NBCRNA-approved Class B activities is on the NBCRNA website.
- *Core Modules* provide directed assessed CE in four core areas of anesthesia.
- *CPC Assessment* assesses the critical core knowledge needed to practice the art and science of nurse anesthesia.

## Categories of CPC Compliance

NBCRNA recognizes two categories of CPC compliance: Full and Conditional (Interim).

### Full CPC Compliance

Applicants who fulfill all requirements of the CPC program are granted Full CPC Compliance and receive a status of "CPC Compliant." A status of CPC Compliant means that a nurse anesthetist has met all CPC Program requirements for the current CPC cycle.

In order to achieve Full CPC Compliance, an applicant must submit all required applications (i.e., 2-Year Check-In at the midpoint of each four-year CPC Cycle, and the CPC Compliance, at end of each four-year CPC Cycle), remit all corresponding fees, and comply with all program requirements.

### Conditional (Interim) CPC Compliance

The purpose of Interim CPC Compliance is to provide for those individuals who, for a specific reason and for a limited period of time, may not be in full compliance with all CPC requirements.

# Requirements for Full CPC Compliance

In order to achieve Full CPC Compliance, an applicant must submit a CPC application, remit the corresponding fees, and comply with all of the following requirements prior to his/her CPC compliance expiration date.

The subsections below are required to be reported every four years; however, nurse anesthetists are also required to complete a 2-Year Check-In. The purposes of the mid-cycle “check-in” are to: Validate state and/or APRN licensure as appropriate; confirm continued practice within the specialty; update personal contact information; and review progress made toward four-year CPC program requirements.

- **Possess Initial Certification granted by the NBCRNA, or its predecessor**
- **Licensure:** Documentation of compliance with all state requirements for licensure as a registered nurse performing nurse anesthesia, including a current unrestricted license to practice as a registered professional nurse, with authority to practice nurse anesthesia if such authority is granted, in at least one state and in all states in which the applicant currently holds an active license. For those individuals employed by the United States government, “state requirements” refer to the requirements of any state or territory of the United States.
- **Practice:** During each four-year CPC cycle, the applicant must be engaged in the practice of nurse anesthesia prior to the applicant’s CPC compliance expiration date and must submit an accurate record of practice.
  - The practice of nurse anesthesia may include clinical practice, nurse anesthesia-related administrative, educational or research activities, or a combination of two or more of such areas of practice. To be nurse anesthesia-related, activities must have as their primary objective and be directly related to the delivery of anesthesia care to patients or the improvement of delivery of anesthesia care to patients.
  - NBCRNA no longer requires the submission of information regarding the specific number of hours practiced during the CPC cycle at the time of application.

The decision as to whether an applicant has satisfied the practice requirement is at the discretion of the NBCRNA.

- **Certifications by the Applicant:** Each applicant must make the following certifications:
  - That all current registered nurse licenses are in good standing, are not suspended or limited by any state, have never been surrendered or relinquished (whether voluntarily or involuntarily) and are not the subject of a pending action or investigation.
  - That all current advanced practice nurse licenses are in good standing, are not suspended or limited by any state, have never been surrendered or relinquished (whether voluntarily or involuntarily) and are not the subject of a pending action or investigation.
  - That he or she has not been adjudicated by a court or regulatory authority to be mentally or physically incompetent.
  - That he or she does not currently suffer from substance use disorder (SUD) [drug or alcohol addiction or abuse], that is impacting their practice.
  - That he or she has not been convicted of, or pleaded no contest to, a crime.
  - That he or she has not engaged in unethical conduct.



- That, prior to the date of application submission, he or she has been engaged in the practice of nurse anesthesia during the current CPC cycle and that the record of practice submitted with the application is accurate.
- That the application and all corresponding content being submitted is accurate.

If the applicant does not so certify, he or she must provide full documentation of the reasons therefore with sufficient specificity to allow the NBCRNA to evaluate the possible impact of the problem or action on the applicant's current ability to practice nurse anesthesia, and to resolve the issue to the NBCRNA's satisfaction.

- **Waiver of Liability and Agreement of Authorization, Confidentiality and Nondisclosure Statements:** Each applicant for CPC compliance must, by his or her signature, agree that he or she has read, understands, and intends to be legally bound by those statements.
- **Complete all CPC Program components required for the specific CPC cycle, as detailed in the following examples:**
  - **Initially certified on or before December 31, 2015.** Applicants who recertified in an even year (i.e., 2016) entered into the CPC Program on August 1, 2016. Applicants who recertified in an odd year (i.e., 2017) entered into the CPC Program on August 1, 2017.
  - **Initially certified between January 1, 2016 and July 31, 2016.** Individuals who were initially certified between January 1, 2016, and July 31, 2016, entered into the CPC Program on the August 1 following the date of initial certification.
  - **Initially certified on or after August 1, 2016.** Applicants initially certified on or after August 1, 2016, entered (or will enter) into the CPC Program immediately after granting of the initial CRNA credential.

## First Eight-Year CPC Program Period

### First four-year CPC cycle requirements:

- 60 Class A credits
- 40 Class B credits
- Four Core Modules, one in each of the following four topics:
  - Airway management techniques
  - Applied clinical pharmacology
  - Human physiology and pathophysiology
  - Anesthesia technology and equipment

**Notes:** Modules are optional for CPC cycles ending on or before July 31, 2021. Nurse anesthetists should look for NBCRNA-recognized core modules.

### Second four-year CPC cycle requirements:

- 60 Class A credits
- 40 Class B credits

- Four Core Modules – one in each of the following four topics:
  - Airway management techniques
  - Applied clinical pharmacology
  - Human physiology and pathophysiology
  - Anesthesia technology and equipment
- CPC Assessment must be completed no later than six months before the CPC compliance expiration date. The first CPC Assessment is a performance standard, NOT a Pass/Fail assessment. It is taken only one time during this CPC cycle.

**Note:** Additional continuing education activities may be required by the NBCRNA for anyone not meeting the CPC Assessment performance standard. Failure to achieve a performance standard on this CPC Assessment will not result in loss of certification; however, failure to complete the additional continuing education requirements prior to the CPC compliance expiration date will result in loss of certification.

Eligibility specifics, application requirements, and policies specific to the CPC Assessment are found in this handbook.

## Second Eight-year CPC program period

### First four-year CPC cycle requirements:

- 60 Class A credits
- 40 Class B credits
- Four Core Modules - one in each of the following four topics
  - Airway management techniques
  - Applied clinical pharmacology
  - Human physiology and pathophysiology
  - Anesthesia technology and equipment

### Second four-year CPC cycle requirements:

- 60 Class A credits
- 40 Class B credits
- Four Core Modules - one in each of the following four topics
  - Airway management techniques
  - Applied clinical pharmacology
  - Human physiology and pathophysiology
  - Anesthesia technology and equipment
- CPC Assessment must be completed no later than six months before the CPC compliance expiration date.

- A total of four attempts are allowed to achieve the CPC Assessment passing standard
- Failure to achieve a passing score on the CPC Assessment prior to the CPC compliance expiration date will result in loss of certification

## **Initially certified on or after January 1, 2024**

Nurse anesthetists in this group will immediately enter into the CPC program, consisting of two four-year cycles, each comprising 60 Class A credits, four Core Modules, and 40 Class B credits. The second four-year cycle will also include a CPC assessment measured against a passing standard, which must be completed no later than six months before the individual's CPC compliance expiration date. Those who do not achieve the required passing standard and obtain a passing score on their first attempt may retake the assessment up to three additional times. Failure to achieve a passing score on the CPC assessment prior to the CPC compliance expiration date will result in loss of certification.

## **Conditional (Interim) CPC Compliance**

Applicants who have a restricted license to practice professional nursing and, where applicable, nurse anesthesia, in any state in which the applicant currently holds an active license, or whose license is on probation or conditioned upon meeting certain requirements, may, at the discretion of the NBCRNA, be granted Conditional CPC compliance, provided that all other CPC compliance requirements have been fulfilled. The Conditional CPC compliance will reflect any conditions imposed by the appropriate state licensure authority.

Examples of a restricted license include a license to practice only under supervision or a license to practice provided the individual remains in a drug-related, alcohol-related or other type of treatment, monitoring or rehabilitation program for a stated period of time. The Conditional CPC compliance card granted under this paragraph shall state that the nurse anesthetist is conditionally CPC compliant.

### **Conditional CPC Compliance Period**

Conditional CPC compliance shall remain in effect as long as the individual complies with all terms of the conditions on his or her license. It shall be revoked for failure to comply. The nurse anesthetist shall be responsible for providing the NBCRNA with written documentation from the state board of nursing that he or she has complied with all licensure conditions for the requisite period of time.

### **Change in Status**

Full CPC compliance may be changed to Conditional CPC compliance for failure to maintain an unrestricted license to practice professional nursing and, where applicable, nurse anesthesia, in all states in which the applicant currently holds an active license.

A request to change Conditional CPC compliance to Full CPC compliance must be accompanied by official written documentation from the state board of nursing sufficient to demonstrate that any licensure condition has been removed.

The decision to change an individual's CPC compliance status is at the discretion of the NBCRNA.

## CPC Assessment Overview

The following provides an overview of the CPC assessment. There are additional eligibility requirements that must be met prior to sitting for an assessment. For these eligibility requirements, refer to the section below, Eligibility Requirements for the CPC Assessment.

A nurse anesthetist who was initially certified **on or before December 31, 2023**, will take the CPC assessment during his or her first eight-year CPC period and will be required to achieve the performance standard on the assessment. This assessment will be required during the second four-year CPC cycle of that first eight-year period. He or she will be required to achieve the passing standard on the CPC assessment during his or her second eight-year CPC period and during all periods thereafter. This assessment will be required during the second four-year CPC cycle of that second eight-year period.

A nurse anesthetist who is initially certified **on or after January 1, 2024**, will be required to achieve the passing standard on the CPC assessment during his or her *first* eight-year CPC period, and during all periods thereafter. This assessment will be required during the second four-year CPC cycle of that first eight-year period.

The CPC assessment will assess the critical core knowledge of experienced nurse anesthetists needed to safely practice the art and science of nurse anesthesia in the four core domains of anesthesia practice, listed below:

- Airway Management
- Applied Clinical Pharmacology
- Physiology and Pathophysiology
- Anesthesia Equipment and Technology

Application to sit for the CPC assessment is separate from the application process for CPC compliance. The appropriate CPC assessment for a given CPC cycle must be successfully completed prior to submitting an application for CPC compliance.

### CPC Assessment — Performance Standard

The CPC assessment administered to nurse anesthetists who were initially certified **on or before December 31, 2023**, will provide an opportunity to become familiar with the CPC assessment content outline and the electronic assessment format. Nurse anesthetists in this group will take the CPC assessment only once during their first eight-year CPC period and will be required to achieve the performance standard. This first CPC assessment can be taken at any time during the second four-year CPC cycle of their first eight-year period but must be completed at least six months prior to the individual's CPC compliance expiration date for that CPC cycle.

This first CPC assessment is intended to provide feedback on the nurse anesthetist's relative strengths in different knowledge areas. The nurse anesthetist who does not meet one or more performance standards on the first CPC assessment will be required to take additional continuing education in any of

the core domains in which he or she did not meet the performance standard. This requirement is in addition to the requirement for four Core Modules in each four-year CPC cycle.

For the purposes of the CPC Assessment, the term “performance standard” is being used to indicate the minimum score that must be attained by an examinee on the first CPC Assessment. Non-attainment of the performance standard will not result in the loss of certification but will result in additional continuing education requirements in any core areas deemed to be deficient.

**Failure to meet the performance standard in any core domain on the CPC assessment will not result in loss of certification; however, failure to complete the additional continuing education by the CPC compliance expiration date for that four-year cycle will result in a loss of certification.**

## CPC Assessment— Passing Standard

For nurse anesthetists who are certified **on or before December 31, 2023**, the CPC assessment taken during their second eight-year CPC period, and during all periods thereafter, will be measured against a passing standard. The term, “passing standard” is being used as the minimum score that must be attained by an examinee on subsequent CPC assessment cycles (i.e., after the first eight-year CPC period). The passing standard will need to be attained by examinees within four attempts in order to maintain certification.

For nurse anesthetists who are initially certified **on or after January 1, 2024**, the CPC assessment taken during their first eight-year CPC period, and during all periods thereafter, will be measured against a passing standard. The term, “passing standard” is being used as the minimum score that must be attained by an examinee on all CPC assessment cycles. The passing standard will need to be attained by examinees within four attempts in order to maintain certification.

The CPC assessment measured against a passing standard is a pass/fail assessment. It can be taken at any time during the second four-year CPC cycle, but must be completed no later than six months before the CPC compliance expiration date for that cycle. Nurse anesthetists who do not pass their initial attempt at the CPC assessment will have an additional three attempts to pass the assessment before the final CPC compliance expiration date of the four-year CPC cycle. **A nurse anesthetist must achieve a passing score in order to maintain certification.**

**Nurse anesthetists who do not pass the CPC assessment on the fourth attempt will not have an opportunity to retake the assessment again and will not have the option to complete additional continuing education. Failure to pass the CPC assessment by the end of the CPC cycle will result in loss of certification.**

Nurse anesthetists who have failed to pass the CPC assessment on the fourth attempt may submit a request for review or appeal of the adverse action in accordance with the NBCRNA Policies and Procedures for Discipline, Administrative Action and Appeals.

## Eligibility Requirements for the CPC Assessment

In order to be eligible to sit for the CPC assessment, applicants must:

- Submit documentation of compliance with all state requirements for licensure as a registered nurse performing nurse anesthesia, including a current unrestricted license to practice as a registered professional nurse, with authority to practice nurse anesthesia if such authority is granted, in at least one state and in all states in which the applicant currently holds an active

license. For those individuals employed by the United States government, “state requirements” refer to the requirements of any state or territory of the United States.

- Submit a complete, accurate and electronically signed assessment application during the CPC cycle in which a CPC assessment is required.
- Submit a color, digital self-image taken within the previous six months.
- Make the following eligibility certifications:
  - That all current registered nurse licenses are in good standing, are not suspended or limited by any state, have never been surrendered or relinquished (whether voluntarily or involuntarily) and are not the subject of a pending action or investigation.
  - That all current advanced practice nurse licenses are in good standing, are not suspended or limited by any state, have never been surrendered or relinquished (whether voluntarily or involuntarily) and are not the subject of a pending action or investigation.
  - That he or she has not been adjudicated by a court or regulatory authority to be mentally or physically incompetent.
  - That he or she does not currently suffer from substance use disorder (SUD) [drug or alcohol addiction or abuse], that is impacting their practice.
  - That he or she has not been convicted of, or pleaded no contest to, a crime.
  - That he or she has not engaged in unethical conduct.
  - That, prior to the date of application submission, he or she has been engaged in the practice of nurse anesthesia during the current CPC cycle and that the record of practice submitted with the application is accurate.
  - That the application and all corresponding content being submitted is accurate.

If the applicant does not so certify, he or she must provide full documentation of the reasons therefore with sufficient specificity to allow the NBCRNA to evaluate the possible impact of the problem or action on the applicant’s current ability to practice nurse anesthesia, and to resolve the issue to the NBCRNA’s satisfaction.

- Sign the Waiver of Liability and Agreement of Authorization, Confidentiality and Nondisclosure statements, clarifying that the individual has read, understands and intends to be legally bound by those statements.
- Pay the assessment fee.

## Significance of Eligibility Status

An applicant who holds “CPC assessment eligible” status with the NBCRNA has successfully submitted a CPC assessment application and has been granted eligibility to take the CPC assessment by the NBCRNA. The applicant with “CPC assessment eligible” status has not passed the CPC assessment required to be CPC compliant.

## Expiration of Eligibility Status

Eligibility to sit for the CPC assessment lasts for a defined number of days corresponding with the end of the CPC assessment window that the applicant selected, or until the applicant takes the CPC assessment, whichever occurs first.

## Ineligibility to Take the CPC Assessment

Applicants will be found ineligible to take the CPC assessment for any one or more of the following reasons:

- If, in the determination of the NBCRNA, the applicant was guilty of cheating on the CPC assessment
- Failure to make the required eligibility certifications and to provide sufficient documentation to resolve the issue to the satisfaction of the NBCRNA
- Failure to meet any of the other eligibility requirements, including failure to sign or accept the waiver of liability and agreement of authorization, confidentiality and nondisclosure statements
- Failure to pass the CPC assessment within the four-year CPC cycle

## Grounds for Denial, Suspension or Revocation of Eligibility Status

The NBCRNA will automatically deny, suspend or revoke an applicant's eligibility to take the CPC assessment in the following circumstances:

- Failure by the applicant to maintain current and unrestricted licensure as a registered professional nurse in at least one state
- Loss or surrender of licensure or other authority to practice nurse anesthesia in any state for any reason that, in the judgment of the NBCRNA, relates to the anesthetist's safe or ethical practice of nurse anesthesia
- Adjudication by a court or regulatory authority that the applicant is mentally or physically incompetent
- Suspension or termination from participation in a federal health care program for reasons relating to the, unsafe, unlawful or unethical practice of nurse anesthesia
- Conviction of, or pleading no contest to, a crime which, in the judgment of the NBCRNA, relates to the anesthetist's safe or ethical practice of nurse anesthesia

The NBCRNA may, at its discretion, suspend, deny or revoke an applicant's eligibility to take the CPC assessment for any of the following reasons:

- Circumstances change so as to render one of the eligibility certifications made by the applicant invalid

- Falsification of the CPC assessment application, intentional misstatement of material fact or deliberate failure to provide relevant information on the assessment application or to the NBCRNA at any time, or assisting another person to do any of the above
- Failure by the applicant to maintain current and unrestricted licensure as a registered professional nurse in every state of practice, or loss of authority to practice
- Loss or surrender of licensure or authority to practice nurse anesthesia in any state for any reason other than retirement or cessation of practice unrelated to any disciplinary action or concern about disciplinary action
- Conviction of, or pleading no contest to, a crime
- Engaging in unethical conduct
- Provision of false or incomplete information to the NBCRNA in connection with the credentialing process
- Dishonest or deceptive behavior related to any NBCRNA examination or assessment, database, or intellectual property, cheating on an examination or assessment administered by the NBCRNA, inappropriate use of examination or assessment questions, or assisting another individual to engage in any such conduct
- Unauthorized use of any NBCRNA credential or other health professional designation or false claim of certification or other professional designation
- Violation of any NBCRNA policy or failure to cooperate with an NBCRNA investigation or audit
- Cheating or assisting another person to cheat on the CPC assessment, or otherwise engaging in dishonest or other improper behavior at any time in connection with the CPC assessment
- Documented evidence of retention, possession, copying, distribution, disclosure, discussion, or receipt of any CPC assessment question, in whole or in part, by written, electronic, oral or other form of communication, including, but not limited to, emailing, copying or printing of electronic files, and reconstruction through memorization and/or dictation, before, during or after the CPC assessment
- Any other conduct that, in the judgment of the NBCRNA, calls into question the ability of the nurse anesthetist to serve patients in an honest, competent, and professional manner.

## Application for CPC Assessment

The NBCRNA-administered CPC assessment facilitates the measurement of knowledge, skills and abilities for experienced nurse anesthetists who hold the NBCRNA-granted CRNA credential. The CPC assessment is one component of the CPC Program that nurse anesthetists must successfully complete in order to be deemed CPC compliant.

Each applicant must successfully complete the CPC assessment within the appropriate time frame during the second four-year CPC cycle of the eight-year CPC period.

In order to take the CPC assessment, every applicant must submit the following materials to the NBCRNA:

- **Application and Fee(s):** A completed, signed, electronic CPC Assessment Application and payment of all fees must be received by the NBCRNA prior to the requested CPC assessment administration window in order to allow adequate time for processing and verification of information.



- **Documentation of Licensure:** Documentation of compliance with all state requirements for licensure as a registered nurse performing nurse anesthesia, including a current unrestricted license to practice as a registered professional nurse, with authority to practice nurse anesthesia if such authority is granted, in at least one state and in all states in which the applicant currently holds an active license. For those individuals employed by the United States government, “state requirements” refer to the requirements of any state or territory of the United States.
- **Documentation of Practice:** A record of practice setting forth:
  - A list of the facilities at which the applicant has practiced clinical nurse anesthesia or performed nurse anesthesia-related administrative, educational or research services during the current CPC cycle and up to the date of submission of the CPC assessment application
  - The applicant’s title or role at each facility, such as “practitioner” or “educator”
  - The address of each facility
  - The name and phone number of a contact person who can verify employment at each facility
  - The inclusive dates of practice during current CPC cycle at each facility
- **Applicant Photo ID:** Every applicant must submit a color, digital self-image that has been taken within the previous six months of the CPC assessment application submission date.

## Application for CPC Compliance

A new CPC compliance application must be submitted at the end of each four-year CPC cycle. In order to become or remain CPC compliant, each applicant must submit the following materials to the NBCRNA:

### Process for Each Four-Year CPC Cycle

- **Application and Fee(s):** A completed, signed, electronic CPC Compliance Application, including but not limited to acceptable documentation of completion of Class A credits, Class B credits, Core Modules (if required), and payment of all fees must be received by the NBCRNA prior to the applicant’s four-year CPC compliance expiration date in order to allow adequate time for processing and verification of information.
- **Documentation of Licensure:**
  - Every applicant must document compliance with all state requirements for licensure as a registered nurse performing nurse anesthesia, including a current unrestricted license to practice as a registered professional nurse, with authority to practice nurse anesthesia if such authority is granted, in at least one state and in all states in which the applicant currently holds an active license. For those individuals employed by the United States government, the license may be issued by any state or territory of the United States.
  - If the applicant has practiced in more than one state during the prior four-year period, the applicant must provide appropriate documentation of licensure for the relevant time of practice in each state.

- **Documentation of CPC Program Components:** Acceptable documentation of the completion of all CPC program requirements must be received by the NBCRNA prior to the applicant's four-year CPC compliance expiration date in order to allow adequate time for processing and verification of information.
  - Requirements for each of the two four-year cycles leading up to the applicant's assigned CPC compliance expiration date include:
    - 60 Class A credits
    - 40 Class B credits
    - Four Core Modules (optional for certificants who have CPC cycles ending on or before July 31, 2021; required for all other CPC cycles)
  - Assessment (successful completion required during second four-year cycle)
  - All information provided by the applicant during the CPC compliance application process is subject to audit and verification by the NBCRNA.
    - Nurse anesthetists are encouraged to provide all documentation substantiating Class B credits at the time of application for CPC compliance.
    - If an applicant's application is selected for audit, he or she must submit all requested materials to the NBCRNA electronically within 30 business days from the date of NBCRNA's request.
    - Refusal to comply with the audit process or failure to provide adequate requested documentation may, at the discretion of the NBCRNA, result in disciplinary action, including revocation of certification, in accordance with the NBCRNA Policies and Procedures for Discipline, Administrative Action and Appeals.
- **Documentation of Practice:** Every applicant must submit a record of practice setting forth:
  - A list of the facilities at which the applicant has practiced clinical nurse anesthesia or performed nurse anesthesia-related administrative, educational or research services within the preceding four-year period
  - The applicant's title or role at each facility, such as "practitioner" or "educator"
  - The address of each facility
  - The name and phone number of a contact person who can verify employment at each facility
  - The inclusive dates of practice during the current CPC cycle at each facility

# CPC-Specific Policies and Procedures

The following policies or procedures are CPC-specific. Please note that there are additional NBCRNA policies and procedures posted to the NBCRNA website that may apply. Nurse anesthetists are responsible for being aware of any, and all, applicable policies.

## CPC Compliance Period

Full CPC compliance is effective for a cycle of up to four years, or the designated CPC period. CPC compliance expires automatically at the end of the CPC compliance period, or CPC cycle, unless renewed. CPC compliance is required in order to maintain certification. The NBCRNA will not, under any circumstances, extend the expiration date for CPC Compliance.

An applicant who failed to complete the CPC program requirements for Class A, Class B, Core Modules, or CPC Examination and/or failed to apply for CPC compliance by the deadline of a given CPC cycle, will lose his or her certification until such time as the CPC program requirements have been satisfied. Please refer to the **Late Completion of CPC Program or Late Application** section below for specific requirements.

An individual who is not CPC compliant for more than four years, or who has lost his or her license or authority to practice nurse anesthesia for more than four years, will be required to complete a Reentry Program as specified by the NBCRNA. Please refer to the NBCRNA *Reentry Program Handbook* for more information.

## Denial of Reported CPC Program Requirements

### ***Class A Assessed CE***

Consistent with ongoing NBCRNA procedures, there is no NBCRNA-administered appeal process for denial of Class A assessed CE activities. To avoid possible denial of CE activity as Class A, nurse anesthetists are strongly encouraged to seek out CE activities that are advertised as being prior-approved to grant Class A assessed CE credits and ensure that their CE activity assessments have been successfully completed.

### ***Class B Professional Development***

Consistent with ongoing NBCRNA procedures, there is no NBCRNA-administered appeal process for denial of Class B professional development activities. Individuals who have experienced denial of a Class B activity during the auditing process will be given a reasonable amount of time, as determined by the NBCRNA, to remedy the CPC compliance gap. An individual who is selected for audit prior to the close of the CPC compliance cycle will be notified of the Class B deficiency and will have the opportunity to submit additional qualified Class B credits to fill the gap prior to the expiration deadline without risk to his/her CPC compliance status.

An individual who is selected for audit after the close of the CPC compliance cycle and who is notified of a denial of Class B activity will be given a 15-business day grace period to remedy any gaps prior to the NBCRNA modifying the audited individual's CPC compliance status. Causes for denial of a Class B credit under the audit process include, but are not limited to, falsifying application information or failure to provide documentation that has been previously identified by the NBCRNA as being required to substantiate a claim for a Class B credit.

Consistent with NBCRNA policies, submitting false CPC application information, including submitting false information regarding completed Class A or Class B activities, or failure to comply with the NBCRNA auditing process, may result in loss of certification.

## Late Completion of CPC Program or Late Application

An applicant who failed to complete the CPC program requirements for Class A, Class B, or the Core Modules and/or failed to apply for CPC compliance by the CPC Compliance expiration date of a given CPC cycle, will lose his or her certification until such time as the CPC program requirements have been satisfied, as detailed in the table below.

The following table describes expectations for a nurse anesthetist who has not completed the Class A, Class B, and/or Core Module requirements for the CPC Program and/or failed to apply for CPC compliance prior to the compliance expiration date of his or her four-year CPC cycle and has lost his or her certification.

**Table 1: Expectations for a nurse anesthetist who has not completed the four-year CPC Program requirements for Class A, Class B, and/or Core Modules, or who has failed to apply for CPC compliance prior to the CPC cycle deadline and has lost certification.**

Timeframe	Requirement
Day 1 up to day 60 after CPC cycle deadline	<ul style="list-style-type: none"> <li>• Complete missing requirements</li> <li>• Pay fee</li> </ul>
Day 61 up to 1 year after CPC cycle deadline	<ul style="list-style-type: none"> <li>• Complete missing requirements and additional requirements prorated to the date of application</li> <li>• Complete additional 5 Class A assessed CEs beyond above requirements</li> <li>• Pay fee</li> </ul>
1 Year plus 1 day up to 2 years after CPC cycle deadline	<ul style="list-style-type: none"> <li>• Complete missing requirements and additional requirements prorated to the date of application</li> <li>• Complete additional 15 Class A assessed CEs beyond above requirements</li> <li>• Pay fee</li> </ul>
2 years plus 1 day up to 3 years after CPC cycle deadline	<ul style="list-style-type: none"> <li>• Complete missing requirements and additional requirements prorated to the date of application</li> <li>• Complete additional 25 Class A assessed CEs beyond above requirements</li> <li>• Pay fee</li> </ul>
3 years plus 1 day up to 4 years after CPC cycle deadline	<ul style="list-style-type: none"> <li>• Complete missing requirements and additional requirements prorated to the date of application</li> <li>• Complete additional 35 Class A assessed CEs beyond above requirements</li> <li>• Pay fee</li> </ul>

An individual who is not CPC compliant for more than four years, or who has lost his or her license or authority to practice nurse anesthesia for more than four years, will be required to complete a Reentry Program as defined by the NBCRNA. Please refer to the NBCRNA Reentry Program Handbook for more information.

Table 1 does not include the CPC assessment, for which a separate appeal process is required if the applicant fails to pass the CPC assessment by end of his or her four-year CPC cycle. **Failure to pass the CPC assessment by the end of the CPC cycle will result in loss of certification.** Nurse anesthetists who have failed to pass the CPC assessment on the fourth attempt may submit a request for review or appeal of the adverse action in accordance with the NBCRNA Policies & Procedures for Discipline, Administrative Action, and Appeals.

**Failure to successfully complete the CPC assessment prior to the CPC compliance expiration date of an applicant's four-year CPC cycle is not considered a late completion or late application situation. Failure to successfully complete the CPC assessment component of the CPC Program will result in loss of certification.**

## Requesting Additions to Class B Credit Table

A nurse anesthetist may submit a request to the NBCRNA via email at [CPC@nbcna.com](mailto:CPC@nbcna.com) to have an activity or activity category added to the Class B table. The process that should be used is as follows:

- Send an email to [CPC@nbcna.com](mailto:CPC@nbcna.com) containing a brief description of the activity or category
- Specify which of the following aspect(s) of the Class B criteria definition the activity or category satisfies, and why:
  - Enhances a nurse anesthetist's foundational knowledge of nurse anesthesia practice
  - Supports patient safety
  - Fosters a nurse anesthetist's understanding of the broader healthcare environment
- Using a scale of 1 to 10 to indicate a continuum of effort, include an estimate of Class B value for the proposed activity or category. (NOTE: A single Class B activity may not be given an effort value greater than 10, and there is not a one-to-one relationship between the number of hours attributed to the activity and the Class B value.) For example:
  - Low effort = 1 for attending a one-hour, non-assessed continuing education activity.
  - Medium effort = 5 for publishing a peer-reviewed article.
  - High effort = 10 for authoring a book.

## Review Process for Requested Additions to the Class B Table

Once a nurse anesthetist has submitted a complete request to have an activity or activity category added to the Class B table, NBCRNA staff will conduct an initial review and issue a decision within 14 days of receipt of the request. If additional input is required before a decision can be made, staff will coordinate the process and provide a decision in as timely a manner as possible. All decisions regarding

requests for adding Class B activities or activity categories are final and not subject to the NBCRNA appeal process. Once approved, any new categories or activities will be added to the NBCRNA Class B table and to the online application to allow the new activity or category to be used by nurse anesthetists.

## 2-Year Check-In

Certificants are required to check-in with the NBCRNA at the mid-point of each 4-year CPC Cycle (“2-Year Check-In”) in order to provide or verify relevant information on record. Certificants will be provided with a deadline by which their check-in must be completed. At the time of 2-Year Check-In, a certificant must:

- **Provide, verify and/or correct the following information in his or her certification record:**
  - That all current registered nurse licenses are in good standing, are not suspended or limited by any state, have never been surrendered or relinquished (whether voluntarily or involuntarily) and are not the subject of a pending action or investigation
  - That all current advanced practice nurse licenses are in good standing, are not suspended or limited by any state, have never been surrendered or relinquished (whether voluntarily or involuntarily) and are not the subject of a pending action or investigation
  - That he or she has not been adjudicated by a court or regulatory authority to be mentally or physically incompetent
  - That he or she does not currently suffer from substance use disorder (SUD) [drug or alcohol addiction or abuse], that is impacting their practice
  - That he or she has not been convicted of, or pleaded no contest to, a crime
  - That he or she has not engaged in unethical conduct
  - That she or she has been engaged in the practice of nurse anesthesia or will be engaged in the practice of nurse anesthesia prior to the end of current CPC cycle
  - That the most recently reported record of practice on file with the NBCRNA is accurate – and if not, what the accurate record of practice is
  - That his or her contact information is accurate, complete and up to date – and if not, what the current or known future contact information is
- **Pay a credentialing fee, as determined by the NBCRNA.** Failure to comply with this policy will result in the following actions unless the NBCRNA in its sole discretion, determines that imposition of sanctions or additional fees would be unjust in the circumstances:
  - 1-30 days post expected 2-Year Check-In deadline: Pay current fees, but no additional financial penalty, only notification of failure to comply with policy.
  - 31-60 days post expected 2-Year Check-In deadline: Pay current fees, additional \$35 fee imposed and certificant is notified again of failure to comply with policy.
  - 61-90 days post expected 2-Year Check-In deadline: Pay current fees, additional \$75 fee imposed and certificant is notified again of failure to comply with policy.

- At 91 days post expected 2-Year Check-In deadline: Pay current fees, additional \$110 fee imposed and certificant is notified again of failure to comply with policy and shall be ineligible for future credential renewal until such time that compliance is re-established.

## Reasonable Accommodation for Persons with Disabilities

A candidate with a documented disability may request a reasonable testing accommodation by submitting a written request and supporting documentation to the NBCRNA with their completed application, or as soon thereafter as the candidate learns of the need for the accommodation. Supporting documentation includes recommendations from qualified professionals who are licensed or otherwise properly credentialed who possess expertise in the disability for which the accommodations are sought and who have made an individualized assessment of the candidate that supports the need for the requested testing accommodations; proof of a candidate's past testing accommodations; and the results of psycho-educational or other professional evaluations.

The NBCRNA will work directly with the candidate and the contracted testing vendor to try to provide reasonable modifications in the testing environment and procedures to make it possible for the candidate with a documented disability to take the assessment under conditions that accurately reflect the candidate's aptitude or achievement level.

The inability to read English is not considered a disability and does not make a candidate eligible for accommodations.

## Initial Certification of New Graduates

New graduates of nurse anesthesia educational programs accredited by the Council on Accreditation of Nurse Anesthesia Educational Programs (COA) who achieve a passing score on the National Certification Examination (NCE) and are granted initial certification by the NBCRNA on or after January 1, 2016, must comply with all of the requirements for CPC compliance approximately four years after the initial certification date. The initial certification card contains the date by which CPC compliance must be demonstrated in order to maintain certification.

## Policies and Procedures for Discipline, Administrative Action and Appeals

Pursuant to NBCRNA Policies & Procedures for Discipline, Administrative Action and Appeals ("Policies"), Certified Registered Nurse Anesthetists, examinees, and applicants for Certification, Recertification or Continued Professional Certification (collectively "certification") are subject to disciplinary or administrative action for engaging in conduct that NBCRNA regards as inconsistent with unrestricted recertification. The Policies sets

forth the conduct that can lead to sanctions, the procedures that will govern, the sanctions that can be imposed, the appeal rights of any individual who is sanctioned, and provisions for reinstatement of certification. The Policies can be accessed on the NBCRNA website, [www.NBCRNA.com](http://www.NBCRNA.com), or requested from the NBCRNA.

## CPC Assessment Content Outline

### Domain I: Airway Management (34%)

#### I. A. Anatomy

- I. A. 1. Normal anatomical structures
- I. A. 2. Variants in anatomical structures

#### I. B. Physiological concepts

- I. B. 1. Normal physiological concepts
- I. B. 2. Variants in physiologic concepts

#### I. C. Pathophysiological concepts

- I. C. 1. Pathophysiologic diseases impacting airway management

#### I. D. Pharmacology

- I. D. 1. Indications, contraindications, effects and adverse effects of anesthetic and adjunct medications related to airway management

#### I. E. Airway equipment

- I. E. 1. Indications and contraindications associated with the use of airway equipment
- I. E. 2. Failure and corrective actions of airway equipment

#### I. F. Management concepts

- I. F. 1. Airway assessment
- I. F. 2. Risks, benefits, and alternative airway techniques (awake or asleep intubations, laryngeal mask airways, oropharyngeal airways, nasopharyngeal airways, fiber optic techniques, endobronchial intubation, adjunct airway equipment, etc.)
- I. F. 3. Anticipation, identification, and management of urgent and/ emergent airways
- I. F. 4. Anticipation, identification, and management of difficult airways and ventilation
- I. F. 5. Emergence/extubation/reintubation
- I. F. 6. Airway Complications

### Domain II: Applied Clinical Pharmacology (24%)

#### II. A. Pharmacokinetics/pharmacodynamics/Pharmacogenetics of anesthetics and adjunct medications



**II. B Factors influencing medication selection**

II. B. 1. Physiological

II. B. 2. Pathophysiological

II. B. 3. Laboratory & diagnostic studies

II. B. 4. Utilization, actions, interactions, benefits, adverse effects, abnormal responses, alternatives, and antagonists

II. B. 5. Comorbidity

**II.C. Intraoperative monitoring techniques**

**II.D. Infection prevention principles**

**II.E. Adverse Pharmacological Reactions**

**Domain III: Human Physiology and Pathophysiology (24%)**

**III.A. Cardiovascular**

III. A. 1. Normal anatomical structures and function

III. A. 2. Physiologic processes and anesthetic considerations

III. A. 3. Pathophysiologic disease processes and associated disorders

**III.B. Respiratory**

III. B. 1. Normal anatomical structures and function

III. B. 2. Physiologic processes and anesthetic considerations

III. B. 3. Pathophysiologic disease processes and associated disorders

**III.C. Neurological**

III. C. 1. Normal anatomical structures and function

III. C. 2. Physiologic processes and anesthetic considerations

III. C. 3. Pathophysiologic disease processes and associated disorders

**III.D. Renal**

III. D. 1. Normal anatomical structures and function

III. D. 2. Physiologic processes and anesthetic considerations

III. D. 3. Pathophysiologic disease processes and associated disorders

**III.E. Gastrointestinal**

III. E. 1. Normal anatomical structures and function

III. E. 2. Physiologic processes and anesthetic considerations

III. E. 3. Pathophysiologic disease processes and associated disorders

### **III.F. Hematological**

- III. F. 1. Normal anatomical structures and function
- III. F. 2. Physiologic processes and anesthetic considerations
- III. F. 3. Pathophysiologic disease processes and associated disorders

### **III.G. Endocrine**

- III. G. 1. Normal anatomical structures and function
- III. G. 2. Physiologic processes and anesthetic considerations
- III. G. 3. Pathophysiologic disease processes and associated disorders

### **III.H. Musculoskeletal**

- III. H. 1. Normal anatomical structures and function
- III. H. 2. Physiologic processes and anesthetic considerations
- III. H. 3. Pathophysiologic disease processes and associated disorders

### **III. I. Interpret laboratory studies, and diagnostic studies**

### **III. J. Factors influencing anesthetic approach, technique, and management**

- III. J. 1. Indications, contraindications, complications, and alternatives
- III. J. 2. Assessment and interpretation of intraoperative data

## **Domain IV: Anesthesia Equipment and Technology (18%)**

### **IV. A. Proper function, malfunction, and troubleshooting complications**

### **IV. B. Safety and infection prevention protocols**

### **IV. C. Anesthetic delivery and clinical monitoring devices**

- IV. C. 1. Selection
- IV. C. 2. Risks
- IV. C. 3. Benefits
- IV. C. 4. Alternatives
- IV. C. 5. Complications

### **IV. D. Assess, analyze, interpret and use perioperative data**