



Infection Control (ICE[®])

Exam Outline and References

The ICE exam is a component of the National Entry Level Dental Assistant (NELDA[®]), Certified Dental Assistant™ (CDA[®]) and Certified Orthodontic Assistant (COA[®]) certification programs and tests knowledge-based competence.

There are no eligibility requirements to take the ICE exam.

The purpose of the ICE exam is to ensure that individuals meet the minimum national standard for knowledge-based competence in dental infection prevention and control tasks critical to the health and safety of patients and dental healthcare personnel.

NELDA exams

Anatomy, Morphology and Physiology (AMP)

Radiation Health and Safety (RHS[®])

Infection Control (ICE)

CDA exams

Radiation Health and Safety (RHS)

Infection Control (ICE)

General Chairside Assisting (GC)

COA exams

Orthodontic Assisting (OA)

Infection Control (ICE)

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ICE Exam

Exam Weighting by Domain

- I. Prevention of Disease Transmission (20%)
- II. Prevention of Cross-contamination (34%)
- III. Process Instruments and Devices (26%)
- IV. Occupational Safety and Administration Protocols (20%)

Exam Administration

| | |
|-------------------------------------|----|
| Number of Multiple-Choice Questions | 80 |
| Time for Exam (minutes) | 60 |
| Time for Appointment (minutes) | 65 |

Testing Options

This exam is administered in-person and through remote online proctoring. The candidate may choose the method they prefer. Remote proctoring allows candidates to take exams using their own computer while being remotely monitored by webcam and microphone.

How DANB exams are administered

DANB uses computer adaptive testing (CAT). Exams are scored based on the level of difficulty of the questions answered correctly. This method can more accurately pinpoint a candidate's ability level. Each candidate is presented with the same percentage of questions from each domain. The average candidate will answer around 50% of the questions correctly.

ICE Exam Outline

I: Prevention of Disease Transmission (20%)

- A. Infectious diseases
 - 1. Modes of transmission
 - 2. Patient safety
 - 3. Occupational risk
- B. Review medical histories for transmissible diseases.
- C. Hand hygiene, including but not limited to:
 - 1. product types (e.g., antimicrobial, antibacterial, alcohol rub).
 - 2. skin/nail care.
 - 3. techniques.
 - 4. protocols
- D. Use of personal protective equipment (PPE), including but not limited to:
 - 1. select appropriate PPE.
 - 2. prepare PPE for reuse.
 - 3. don and doff techniques and sequence.
 - 4. patient safety precautions.
 - 5. dispose of contaminated PPE.
- E. Minimize contact with aerosols, droplets and spatter using, but not limited to:
 - 1. barriers.
 - 2. dental dams.
 - 3. evacuation.

II. Prevention of Cross-contamination (34%)

- A. Clean and disinfect treatment areas and laboratories
- B. Prepare and use chemical disinfectants.
- C. Use of surface barriers.
- D. Prepare tray setups (e.g., single-use devices [SUD], single unit dosing, aseptic retrieval).
- E. Maintain and monitor dental unit water lines.
- F. Clean and maintain evacuation lines and traps.
- G. Clean and disinfect equipment, including but not limited to radiography equipment.
- H. Disinfect impressions and dental appliances.
- I. Dispose of biohazardous and other waste.

III: Process Instruments and Devices (26%)

- A. Process instruments and devices, including but not limited to:
 - 1. Transport contaminated instruments/devices.
 - 2. Follow workflow patterns.
 - 3. Prepare and use chemical agents.
 - 4. Select the system for sterilization.
 - 5. Package and label for sterilization.
 - 6. Load and unload the sterilizer.
 - 7. Store and maintain sterility.
- B. Monitor and maintain processing equipment (e.g., sterilizers, ultrasonic cleaner).
 - 1. Select the system for sterilization monitoring.
 - 2. Interpret results from sterilization monitoring devices.
 - 3. Respond to equipment malfunctions.

IV: Occupational Safety and Administration Protocols (20%)

- A. Occupational safety regulations, standards and guidelines:
 - 1. OSHA Bloodborne Pathogens Standard as it applies to, but not limited to:
 - a. engineering and work practice controls.
 - b. needle and sharps safety.
 - c. sharps exposure and post-exposure protocols.
 - d. record keeping and training.
 - 2. OSHA Hazard Communication Standard as it applies to, but not limited to:
 - a. chemical exposure/hazard and first aid.
 - b. engineering and work practice controls.
 - c. safety data sheets (SDS).
 - d. secondary containers.
 - 3. CDC guidelines.
 - 4. federal regulations (e.g., EPA, FDA).
- B. Maintain and document programs and policies for infection prevention control and safety, including but not limited to:
 - 1. exposure control plan.
 - 2. infection control breaches.
 - 3. quality assurance (quality improvement).
 - 4. sterilization logs/records.
 - 5. training records.

ICE Exam Suggested References

DANB exam committees use the following textbooks and reference materials to develop this exam. This list does not include all available study materials; these are the resources that exam committees have determined provide the most up-to-date information needed to meet a determined level of competence on this exam. It is not an endorsement of the publications. Any one reference will likely not include all the study material required to pass the exam. **Please note that previous editions of the resources below may be used for study purposes if the previous version was published within the past 7 years, unless noted otherwise.**

Suggested Exam Preparation References

1. Bird, Doni L., and Debbie S. Robinson. *Modern Dental Assisting*. 13th ed. Saunders, 2020.
2. Centers for Disease Control and Prevention (CDC). www.cdc.gov.
 - *Guidelines for Infection Control in Dental Health-Care Settings — 2003*. MMWR 2003;52(No. RR-17).
 - *Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care*. Atlanta, GA: Centers for Disease Control and Prevention, US Department of Health and Human Services; October 2016
3. Miller, Chris. *Infection Control and Management of Hazardous Materials for the Dental Team*. 7th ed. Mosby, 2022.
4. U.S. Department of Labor, Occupational Safety and Health Administration (OSHA).
 - *Bloodborne Pathogens (1910.1030)*.
www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.1030
 - *Hazard Communication (1910.1200)*.
www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.1200

Additional/Optional Study Resources

1. Bird, Doni L., and Debbie S. Robinson. *Essentials of Dental Assisting*. 6th ed. Saunders, 2017.
2. American Dental Assistants Association (ADAA). www.dentalassistant.org.
 - *Guidelines for Infection Control in Dental Health Care Settings (#1305)*
 - *Hand Hygiene for the Dental Professional (#1413)*
 - *Infection Control in the Dental Office: A Review for a National Infection Control Exam (#0906)*
 - *Instrument Composition, Care and Maintenance (#1701)*
 - *Personal Protective Equipment (PPE): Basics for Dental Assistants (#1103)*
3. Centers for Disease Control and Prevention (CDC). www.cdc.gov.
 - *Interim Infection Prevention and Control Recommendations for Healthcare Personnel During the Coronavirus Disease 2019 (COVID-19) Pandemic*
www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control-recommendations.html
4. DALE Foundation. www.dalefoundation.org.
 - *DANB ICE Review*
 - *DANB ICE Practice Test*
 - *General Aspects of Instrument Processing*
 - *CDEA module: Understanding CDC's Summary of Infection Prevention Practice in Dental Settings: Basic Expectations for Safe Care*

5. Organization for Safety and Asepsis (OSAP). www.osap.org.
 - *From Policy to Practice: OSAP's Guide to the Guidelines*
 - *OSAP's OSHA & CDC Guidelines: Interact Training System*
6. OSAP and the DALE Foundation. osap.org, dalefoundation.org, dentalinfectionprevention.org
 - *OSAP-DALE Foundation Dental Infection Prevention and Control eHandbook*
7. Phinney, Donna J. and Judy H. Halstead. *Dental Assisting: A Comprehensive Approach*. 6th ed. Cengage, 2022.
8. U.S. Department of Labor, Occupational Safety and Health Administration (OSHA). www.osha.gov.
 - *OSHA Quickcards*
www.osha.gov/Publications/HazComm_QuickCard_Pictogram.html

Acronyms

The following table lists acronyms that you may find on this exam. When you take the exam, the full list of acronyms will be available to you.

| Abbreviation | What it stands for |
|---------------------|---|
| ADA | American Dental Association |
| CDC | Centers for Disease Control and Prevention |
| DHCP | Dental Healthcare Personnel |
| EPA | Environmental Protection Agency |
| FDA | Food and Drug Administration |
| HIPAA | Health Insurance Portability and Accountability Act |
| HIV | human immunodeficiency virus |
| OPIM | other potentially infectious materials |
| OSAP | Organization for Safety, Asepsis and Prevention |
| OSHA | Occupational Safety and Health Administration |
| PPE | personal protective equipment |
| SDS | safety data sheet |
| TB | Tuberculosis |
| USPHS | United States Public Health Service |
| °C | micrometer |
| °F | degrees Celsius |
| BBP | bloodborne pathogens |
| BI | biologic indicator |
| CDA | Certified Dental Assistant |
| CFU/mL | colony forming unit / milliliter |
| CPR | cardiopulmonary resuscitation |
| HAV | hepatitis A virus |
| HBV | hepatitis B virus |
| HCV | hepatitis C virus |
| HDV | hepatitis D virus |
| HEPA | high-efficiency particulate air |
| HEV | hepatitis E virus |
| HPV | human papillomavirus |
| HSV | herpes simplex virus |
| HVE | high-volume evacuation |
| ID | identification |
| IV | intravenous |
| MMR | measles, mumps and rubella |
| MRSA | methicillin-resistant <i>Staphylococcus aureus</i> |
| NIOSH | National Institute for Occupational Safety and Health |
| Tdap | Tetanus, diphtheria, and pertussis |

Exam Development and Maintenance

How exams are developed

DANB exams are developed using this exam outline, which is annually reviewed by subject matter experts. The outline is developed using a content validation study, which includes a job analysis survey where practicing DANB certificants and certificate holders are asked how often tasks are performed and how critical competent performance of tasks is to the health and safety of the public and oral healthcare worker. This study is conducted every five to seven years to ensure the outline is consistent with current clinical practices. DANB's Board of Directors approves all updates to DANB exam outlines.

How the passing standard is determined

The exam passing standard is evaluated and a Standard Setting Study is conducted the year following a Content Validation Study. DANB uses a modified Angoff standard setting method and convenes a panel of subject matter experts to evaluate and make judgements about the difficulty of the exam items and the criticality of the content of the exam items. Modified Angoff standard setting methods are commonly used to set the passing standards for certification exams.

How exams are scored

In a criterion-referenced examination, a candidate must obtain a score equal to, or higher than, the passing score to pass the test. A minimum passing scaled score of 400 must be obtained to pass the exam with scores ranging from 100 to 900 points. Exam results are reported as a "scaled score" which is neither a "number correct" nor a "percent correct" score. Performance on the exam is not compared to the performance of others taking the exam.

Receiving your Pass or Fail status

Candidates will receive a preliminary Pass or Fail status at the test center, or a link to the results if taken through remote online proctoring, upon completion of the examination. A preliminary report may not be used for regulatory or employment decisions. Official exam results will be provided by DANB within one to three weeks.

State Regulations

Each state's dental board implements regulations and establishes rules for delegating legally allowable duties to dental assistants. Passing one or more of the DANB component exams or earning DANB certification only conveys authority to perform these duties in those states that recognize these exams or this certification as meeting state dental assisting requirements. This information is available at www.danb.org.