



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 oral healthcare workers.

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)

Effective 03/12/2025

Note: The content of the exam outline has not changed, but the exam references (page 5) have been updated to the most recent versions.

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 Characteristics

Number of Multiple-Choice Questions	75
Time for Exam (minutes)	60
Time for Appointment (minutes)	65

The 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 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 disease 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. 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 5 years.**

This list is intended to help prepare for this exam. It is not an endorsement of the publications. You should prepare for the exam using as many different study materials as possible.

Suggested Exam Preparation References

1. Bird, Doni L., and Debbie S. Robinson. *Modern Dental Assisting*. 14th ed., 2024.
2. Centers for Disease Control and Prevention (CDC). [cdc.gov](https://www.cdc.gov).
 - *Guidelines for Infection Control in Dental Health-Care Settings — 2003 (MMWR, Vol. 52, RR 17)*. [cdc.gov/mmwr/preview/mmwrhtml/rr5217a1.htm](https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5217a1.htm)
 - *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., 2023.
4. U.S. Department of Labor, Occupational Safety and Health Administration (OSHA).
 - *Bloodborne Pathogens (1910.1030)*. [osha.gov/laws-regs/regulations/standardnumber/1910/1910.1030](https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.1030)
 - *Hazard Communication (1910.1200)*. [osha.gov/laws-regs/regulations/standardnumber/1910/1910.1200](https://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*. 7th ed., 2023.
2. Centers for Disease Control and Prevention (CDC). [cdc.gov](https://www.cdc.gov).
 - *Interim Infection Prevention and Control Recommendations for Healthcare Personnel During the Coronavirus Disease 2019 (COVID-19) Pandemic*. [cdc.gov/coronavirus/2019-ncov/hcp/infection-control-recommendations.html](https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control-recommendations.html)
3. The DALE Foundation. [dalefoundation.org](https://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*

4. Association for Dental Safety. myads.org.
 - *From Policy to Practice: OSAP's Guide to the CDC Guidelines (2022 Edition)*
 - *OSAP's OSHA & CDC Guidelines: Interact Training System, 7th ed.*
5. OSAP and the DALE Foundation. osap.org, dalefoundation.org, dentalinfectionprevention.org
 - *OSAP-DALE Foundation Dental Infection Prevention and Control eHandbook*
6. Phinney, Donna J. and Judy H. Halstead. *Dental Assisting: A Comprehensive Approach*. 6th ed., 2023.
7. U.S. Department of Labor, Occupational Safety and Health Administration (OSHA). osha.gov.
 - *OSHA Quickcard* osha.gov/Publications/HazComm_QuickCard_Pictogram.html
8. American Dental Assistants Association (ADAA). adaausa.org.
 - *Guidelines for Infection Control in Dental Health Care Settings (#1305)*
 - *Instrument Composition, Care and Maintenance (#1701)*

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.

Acronym/Abbreviation	What it stands for
°	degree symbol
°C	degrees Celsius
°F	degrees Fahrenheit
µm	micrometer
AAPD	American Academy of Pediatric Dentistry
ADA	American Dental Association
ADS	Association for Dental Safety Formerly the Organization for Safety, Asepsis and Prevention (OSAP)
AED	automated external defibrillator
BBP	bloodborne pathogens
BI	biologic indicator
b.i.d.	two times a day
C/kg	coulombs per kilogram
CAD/CAM	computer-aided design / computer-aided manufacturing
CBCT	cone beam computed tomography
CCD	charge-coupled device
CDA	Certified Dental Assistant
CDC	Centers for Disease Control and Prevention
CEJ	cementoenamel junction
CFU/mL	colony forming unit / milliliter
CMOS	complementary metal oxide semiconductor
COPD	chronic obstructive pulmonary disease
CPR	cardiopulmonary resuscitation
CT	computed tomography
DEJ	dentinoenamel junction
DO	disto-occlusal
DUWL	dental unit waterline
EPA	Environmental Protection Agency
FDA	Food and Drug Administration
FMS	full mouth series
Gy	gray
H1N1	hemagglutinin type 1 and neuraminidase type 1
HAV	hepatitis A virus
HBIG	hepatitis B immune globulin
HBsAg	hepatitis B surface antigen
HBV	hepatitis B virus
HCS	Hazard Communication Standard
HCV	hepatitis C virus
HDV	hepatitis D virus
HEPA	high-efficiency particulate air
HEV	hepatitis E virus
HIPAA	Health Insurance Portability and Accountability Act

Acronym/Abbreviation	What it stands for
HIV	human immunodeficiency virus
HPV	human papillomavirus
h.s.	at bedtime
HSV	herpes simplex virus
HSV-1	herpes simplex virus - 1 (oral herpes)
HSV-2	herpes simplex virus - 1 (genital herpes)
HVE	high-volume evacuation
ID	identification
IFU	instructions for use
IRM	intermediate restorative material
IV	intravenous
kVp	kilovoltage peak
LED	light-emitting diode
mA	milliamperage
mL	milliliter
mm	millimeter
MMR	measles, mumps and rubella
MOD	mesial, occlusal, distal
MPD	maximum permissible dose
MRI	magnetic resonance imaging
MRSA	methicillin-resistant <i>Staphylococcus aureus</i>
mSv	millisievert
mW/cm ²	milliwatts per square centimeter
N ₂ O	nitrous oxide
NIOSH	National Institute for Occupational Safety and Health
NiTi	nickel-titanium
O ₂	oxygen
OFD	object-film distance
OHCP	oral healthcare personnel
OPIM	other potentially infectious materials
OSHA	Occupational Safety and Health Administration
OTC	over-the-counter
PA	posteroanterior
pH	potential of hydrogen
PID	position indicating device
PPE	personal protective equipment
ppm	parts per million
PSP	phosphor storage plate
PVS	polyvinyl siloxane
q.i.d.	four times a day
rads	radiation absorbed dose
rem	roentgen equivalent man
RPD	removable partial denture
rpm	revolutions per minute
SDS	safety data sheet
SLOB	same lingual, opposite buccal

Acronym/Abbreviation	What it stands for
SLR	single-lens reflex
Sv	sievert
TB	tuberculosis
Tdap	tetanus, diphtheria, and pertussis
t.i.d.	three times a day
TLD	thermoluminescent dosimeter
TMD	temporomandibular disorder
TMJ	temporomandibular joint
UV	ultraviolet
XCP	extension cone paralleling
ZOE	zinc oxide-eugenol

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 the tasks is to the health and safety of the public and oral healthcare personnel. 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. DANB's Board of Directors approves all changes to DANB exam passing standards.

How exams are scored

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

Receiving your exam results

You will be notified by email within 1-3 business days after your exam that your exam results are available in your online DANB account.

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 danb.org.