



D&S Diversified Technologies LLP

Headmaster LLP

Ohio

**General X-Ray Machine Operator (GXMO)
Candidate Handbook**

EFFECTIVE: September 5, 2019 | UPDATED: June 22, 2021

Version 5.3

Ohio GXMO Candidate Handbook

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Contact Information

Questions regarding testing process, test scheduling and eligibility to test: (877) 851-2355		
Questions about Registry status: (614) 466-3543		
<i>D&S Diversified Technologies, LLP</i> 333 Oakland Avenue Findlay, OH 45840 Email: hdmastereast@hdmaster.com Web Site: www.hdmaster.com	<i>Monday through Friday</i> 8:00AM – 6:00PM <i>Eastern Standard Time (EST)</i>	Phone #: (877) 851-2355 Fax #: (406) 442-3357
<i>Ohio Department of Health</i> 246 North High Street Columbus, OH 43215 Web Site: https://odh.ohio.gov/wps/portal/gov/odh/home	<i>Monday through Friday</i> 8:00AM – 5:00PM <i>Eastern Standard Time (EST)</i>	Phone #: (614) 466-3543

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Process for Obtaining a GXMO License

Per the Ohio Department of Health (ODH) website, below are the steps to take in order to receive a GXMO license:

Step 1

To be eligible to take the GXMO exam, complete a GXMO didactic educational program accredited by the Ohio Department of Health (ODH), or be a student enrolled that has completed a minimum of one (1) year in a radiologic technology program of study.

Age Requirement

Candidates must be 18 years of age in order to be eligible to test per state requirements.

Step 2

After completing an accredited GXMO didactic educational program or enrollment in a radiologic technology program of study, the program director will supply you with a GXMO examination registration packet. The original examination registration form must be submitted to D&S Diversified Technologies (D&SDT) by the exam registration deadline on the form. A link to the link to the GXMO Didactic Syllabus Study Guide (under Study Aides) and the [Testing Application Form 1101OX](#) can be printed from the D&SDT GXMO webpage under “Candidate Forms”.

The cost of the examination is \$150.00. To see the available dates and locations for testing, click on the “Test Schedule” button under “Candidate Forms” on the D&SDT GXMO webpage at:

https://hdmaster.com/testing/othertesting/ohio_xray/OH_XRAY_Home.htm.

Further testing registration information is available under “Test Registration Process” on page 3.

Upon completion of the examination, D&SDT will send official examination test results. The examination may be repeated as manytimes as necessary after successful completion of a didactic educational program.

Step 3

Complete at least one GXMO clinical educational program accredited by the Department specific to the type(s) of procedures performed, or if a student enrolled in a radiologic technology program of study, have your program director complete the Clinical Competency Affidavit form.

Step 4

Submit your complete application to the Ohio Department of Health (ODH). You may apply and pay online or mail a hard copy application. A complete application must include the following:

- Application and fee in the amount required by GXMO per ODH, refer to the ODH web site: <https://odh.ohio.gov/wps/portal/gov/odh/know-our-programs/radiologic-licensure/welcome/>
- Didactic course certificate or college transcript if a student is enrolled in a radiologic technology program of study
- Clinical course certificate(s), or a student enrolled in a radiological technology program of study, the Clinical Competency Affidavit form.
- Examination certificate with a passing score of at least 70 percent (70%).

Americans with Disabilities Act (ADA)

ADA Compliance

If you have a qualified disability, you may request special accommodations for examination. Accommodations must be approved by D&SDT in advance of your examination. Click the link for the [ADA Accommodation Form 1404OX](#), or it is available on the D&SDT GXMO webpage under “Candidate Forms” at:

hdmaster.com/testing/othertesting/ohio_xray/oxformpages/oxforms/1404OX.pdf.

This form, along with your application, must be submitted to D&SDT with the required documentation listed on the second page of the ADA application in order to be reviewed for a special accommodation.

VA Benefits Reimbursement

If you are a Veteran and have funds available in your GI Bill, you can print the VA Benefits Reimbursement forms from the D&SDT GXMO webpage, under the “Candidate Forms” column at:

https://hdmaster.com/testing/othertesting/ohio_xray/OH_XRAY_Home.htm.

You may request a copy of your testing fee receipt to submit to VA for possible reimbursement by calling D&SDT at (877)851-2355.

Updating your License to Operate Digital Equipment

Currently licensed GXMO’s may update their license to operate digital equipment by:

Going to “Apply, Amend or Renew” on the ODH website at:

<https://odh.ohio.gov/wps/portal/gov/odh/know-our-programs/radiologic-licensure/welcome/>

to add the clinical module(s) you have completed and submit, via fax, mail or upload online, your clinical course certificate(s).

The GXMO Knowledge Exam

Test Registration Process

The test registration process with D&SDT is as follows:

- Complete the [Testing Application Form 1101OX](#) (click on the link), or it is available under “Candidate Forms” at the D&SDT GXMO webpage at:
https://hdmaster.com/testing/othertesting/ohio_xray/oxformpages/oxforms/1101OX.pdf.
- Provide a copy of your Clinical Course Certificate(s) or college transcripts.
- Pay the application fee, which can be found on the Form 1101OX.
 - Payment can be made by credit card (Visa or MasterCard), money order or cashier’s check.
- Submit your completed testing application with required documentation to D&SDT-Headmaster.
 - Applications must be received in the D&SDT-Headmaster office at least ten (10) business days before a desired test date (excluding Saturdays, Sundays and Holidays.) Mail applications to D&S Diversified Technologies-Headmaster, P.O. Box 6609, Helena, MT 59604.
 - If paying with a credit card, you may email, hdmaster@hdmaster.com or fax, (406)442-3357 your testing application to D&SDT-Headmaster.
 - When faxing your application, there is an additional \$5.00 processing fee.

A complete listing of testing sites can be found by clicking on this link to the [Test Schedule](#) or the D&SDT GXMO webpage at: https://hdmaster.com/testing/othertesting/ohio_xray/OH_XRAY_Home.htm

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Test Day

You should arrive at your confirmed test event between twenty and thirty (20-30) minutes before your scheduled start time. If your test start time is 8:00AM, you need to be at the test site by 7:40AM at the latest.

Identification

You must bring a **US GOVERNMENT ISSUED, SIGNED, NON-EXPIRED PHOTO ID** and a **second form of ID**. Examples of government issued, signed, non-expired photo IDs are:

- Driver's License
- State ID
- Military ID (*that meet all identification requirements*)
- US Passport (*Foreign Passports and Passport Cards are not acceptable*)
- Conceal Carry Permit

Examples of a second form of ID are:

- Library card
- Utility bill
- Credit/Debit card

The **FIRST** and **LAST** names listed on the mandatory ID presented during sign-in at your test event **MUST EXACTLY MATCH** your current name of record FIRST and LAST names. You may call D&SDT at (877)851-2355 to confirm that your name of record matches your US government issued ID.

Please note: You will not be admitted for testing if you do not bring the proper IDs. Check to be positive that both your FIRST and LAST printed names on your IDs match your current name of record. In cases where names do not match, you will not be allowed to test and you will have to reapply for a new test date and repay all required testing fees.

Testing Policies

The following policies are observed at each test site—

- If you arrive late for your confirmed exam (you need to be at the test site to check in at least 20-30 minutes before your scheduled start time – if you test start time is 8:00AM, you need to be at the test site by 7:40AM at the latest), you will not be admitted to the exam and any exam fees paid *will NOT be refunded*.
- If you do not bring valid US government issued, signed, non-expired photo ID, and a second form of ID, you will not be admitted to the exam and any exam fees paid *will NOT be refunded*.
- If the FIRST and LAST printed names on your ID do not match your current name of record, you will not be admitted to the exam and any exam fees paid *will NOT be refunded*.
- If you NO SHOW for your exam day, any test fees paid *will NOT be refunded*. You must re-pay your testing fees on-line in your own record using your ID and PIN# or submit Form 11010X (Testing Application and Payment Form) to schedule another exam date.
- Cell phones, smart watches, fitness monitors, electronic recording devices, Bluetooth-connected devices and personal items (such as briefcases, large bags, study materials, extra books, or papers) are not permitted to be on or near you in the testing room. You will be informed by the test proctor of the designated area in the testing room to place your personal items and electronic devices and you are to collect these items when you complete your test.
- All electronic devices must be **turned off**. Any smart watches or fitness monitors must be removed from your wrist and turned off.
- Anyone caught using any type of electronic recording device during testing will be removed, forfeit all testing fees and you will be reported to your training program and the Ohio Department of Health.

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- Candidates with long hair will be asked to pull their hair back to ensure that there is not any blue tooth device present.
- You may, however, use personal devices during your free time in the waiting area.
- You are encouraged to bring a jacket, snack, drink or study material to have during your free time in the waiting area.
- You may not remove any notes or other materials from the testing room.
- You are not permitted to eat, drink, or smoke (e-cigarette or vape) during the exam.
- You are not allowed to leave the testing room once the exam has begun **for any reason**. If you do leave during your test event, you will not be allowed back into the testing room to finish your exam.
- If you are discovered causing a disturbance of any kind, engaging in any kind of misconduct or try to take any notes or testing materials from the testing room, you will be dismissed from the exam and reported to your training program and the Ohio Department of Health.
- No visitors, guests, pets (including companion animals), instructors or children are allowed.
- D&SDT, facilities, test sites, test observers, test team members and knowledge test proctors are not responsible for personal items brought to the test event.
- **Please review this Ohio GXMO Candidate Handbook before your test day for any updates to testing and/or policies.**

Inclement Weather Policy and Unforeseen Circumstances

If an exam date is cancelled due to weather or other unforeseen circumstances, D&SDT staff will make every effort to contact you via email, text message and phone call using the contact information we have on file to reschedule you, for no charge, to a mutually agreed upon new test date. Therefore, you must keep your contact information up to date in case we need to contact you.

In the event of inclement weather, you will be expected to attend your schedule exam date unless:

- The county you reside in or the county of the testing site is placed on a Level 2 or Level 3 snow emergency.
 - **LEVEL 2 SNOW EMERGENCY**: Roadways are hazardous with blowing and drifting snow. Roads may also be very icy. Only those who feel it is necessary to drive should be out on the roads. Motorists should use extreme caution.
 - **LEVEL 3 SNOW EMERGENCY**: All roadways are closed to non-emergency personnel. No one should be driving during these conditions unless it is absolutely necessary to travel or a personal emergency exists. Those traveling on the roads may subject themselves to arrest.
- The test site closes.
- The test observer cancels the test event.
- There is an accident due to weather on your route to the test site, in which case:
 - Documentation from the Department of Transportation Services or a Police report is required within 3 business days of your scheduled exam day to qualify for a free reschedule.

If the above listed circumstances are not met, failure to attend your scheduled test date will result in a No Show status and any exam fees paid *will NOT be refunded*.

Security

If you refuse to follow directions, use abusive language or disrupt the examination environment, your test will be stopped and scored as a failure. You will be dismissed from the testing room and will forfeit any testing fees paid and a report of your behavior will be given to ODH.

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Anyone who removes or tries to remove test material or takes notes or information from the test site will be reported to ODH and is subject to prosecution to the full extent of the law. Your test will be scored as a test failure and you will forfeit any testing fees paid. You will be reported to ODH and you will not be allowed to retest for a minimum period of six (6) months.

If you give or receive help from anyone during testing (which also includes the use of any electronic recording devices such as cell phones, smart watches, etc. or browsing to other sites during your exam), your test will be stopped and scored as a failure. You will be dismissed from the testing room and will forfeit any testing fees paid. You will be reported to ODH and you will not be allowed to retest for a minimum period of six (6) months.

Reschedule / Refund of Testing Fees Paid / No Show Policies

Please note: All documentation regarding reschedules, refund requests or no shows must be emailed hdmastereast@hdmaster.com or faxed (419)422-8328 to D&SDT. Reschedule, request for refunds or no show documents sent to the Ohio Department of Health (ODH) **will not be valid**.

Reschedules

You may reschedule your test event to a new mutually agreed upon test date for a reschedule fee of \$35.00. All reschedules must be requested three (3) business days prior to the scheduled testing date, excluding Saturdays, Sundays and Holidays.

- Example: If you are scheduled to take your exam on a Saturday, Sunday or Monday, you would need to reschedule by close of business (D&SDT is open until 6:00PM Eastern Standard time Monday-Friday) the Tuesday before your scheduled exam. The Friday, Thursday and Wednesday before a scheduled test date on a Saturday, Sunday or Monday are considered the three business days before your scheduled exam and a cancellation would not be granted on the Friday, Thursday or Wednesday prior to your scheduled exam day.

Scheduled test date is on a:	Reschedule by D&SDT's close of business, Monday-Friday, 6:00PM EST:
Monday	The previous Tuesday
Tuesday	The previous Wednesday
Wednesday	The previous Thursday
Thursday	The previous Friday
Friday	The previous Monday
Saturday	The previous Tuesday
Sunday	The previous Tuesday

Please note: Reschedules will not be granted less than three (3) full business days prior to a scheduled test date.

Refund of Testing Fees Paid

Requesting a refund of testing fees paid is different than rescheduling a test date. Requesting a refund means that you are not interested in taking the GXMO test at all.

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SCHEDULED IN A TEST EVENT

- 1) If you are scheduled in a test event, a refund request of testing fees paid must be made by filling out and submitting the [Refund Request Fillable Form 1405](#) on D&SDT-Headmaster's main webpage at www.hdmaster.com at least **one (1) full business day** prior to your scheduled test event (excluding Saturdays, Sundays and Holidays). No phone calls will be accepted.

Example: If you are scheduled to take your exam on a Saturday, Sunday or Monday, you would need to request a refund by filling out and submitting the Refund Request Fillable Form on the D&SDT-Headmaster main webpage at www.hdmaster.com by close of business the Thursday before your scheduled exam. D&SDT-Headmaster is open until 6:00PM Mountain Standard time/8:00PM EST.

- 2) Refund requests made in the required time frame qualify for a full refund of any testing fees paid minus a \$35 refund fee.
- 3) Refund requests must be made within thirty (30) days of payment of original testing fees with HEADMASTER. Any requests for refunds made beyond the 30 days of original payment of testing fees with HEADMASTER will not be issued.

NOT SCHEDULED IN A TEST EVENT

- 1) Refund requests must be made within thirty (30) days of original payment of testing fees with HEADMASTER. Any requests for refunds made beyond the 30 days of original payment of testing fees with HEADMASTER will not be issued.
- 2) A refund request of testing fees paid must be made by filling out and submitting the [Refund Request Fillable Form 1405](#) on D&SDT-Headmaster's main webpage at www.hdmaster.com. No phone calls will be accepted.
- 3) Refund requests made in the required time frame qualify for a full refund of any testing fees paid minus a \$35 refund processing fee.

No Shows

If you are scheduled for an exam and you do not show up without notifying D&SDT at least one (1) full business day prior to your scheduled testing event, **excluding** Saturdays, Sundays and Holidays, OR if you are turned away for lack of proper identification or any other reason to deem you ineligible to test, you will be considered a **NO SHOW**. You will forfeit all fees paid and must submit a new testing fee to schedule yourself into a new test event.

These fees partially offset D&SDT costs incurred for services requested and resulting work that is performed. If a reschedule or refund request is not received before the one (1) full business day prior to a scheduled test event, excluding Saturdays, Sundays and Holidays (see examples under Reschedules and Refunds of Testing Fees Paid), a NO SHOW status will exist and you will forfeit your testing fees and must repay the full testing fee to secure a new test event.

NO SHOW EXCEPTIONS

Exceptions to the No Show status exist. If you are a No Show for any test component for any of the following reasons, test fees will be refunded or a free reschedule will be authorized to the remitter of record **with appropriate documentation provided within the required time frame**.

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- **Car breakdown or accident:** D&SDT must be contacted within one business day via phone call, fax or email and a tow bill, police report or other appropriate documentation must be submitted within **three (3) business days** of the exam date. If we do not receive proof within the 3-business day time frame you will have to pay as though you were a No Show.
- **Weather or road condition related issue:** D&SDT must be contacted within one business day via phone call, fax or email and a road report, weather report or other appropriate documentation must be submitted within **three (3) business days** of the exam date. If we do not receive proof within the 3-business day time frame you will have to pay as though you were a No Show.
- **Medical emergency or illness:** D&SDT must be contacted within one business day via phone call, fax or email and a doctor’s note must be submitted within **three (3) business days** of the missed exam date. If we do not receive proof within the 3-business day time frame you will have to pay as though you were a No Show.
- **Death in the family:** D&SDT must be contacted within one business day via phone call, fax or email and an obituary for **immediate family only** submitted within **seven (7) business days** from a missed exam date. If we do not receive proof within the 7-business day time frame you will have to pay as though you were a No Show. (Immediate family includes parents, grand and great-grand parents, siblings, children, spouse or significant other.)

Test Results

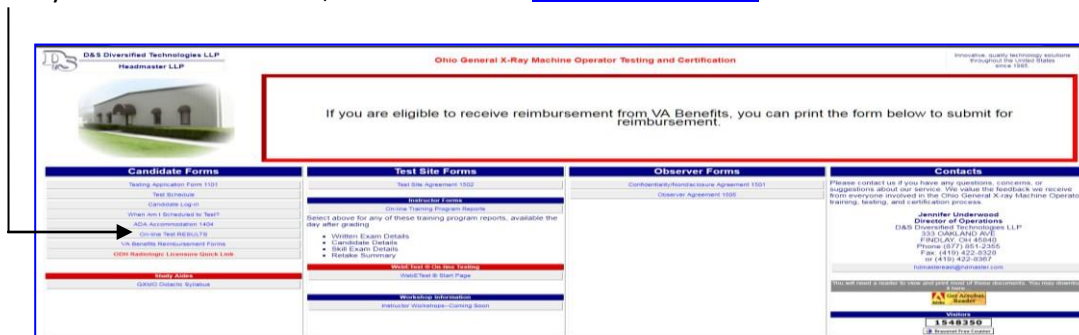
After you have completed the Knowledge Test, your test results will be officially scored and double checked. Official test results are available to you the day tests are scored. You will be able to access your test results online by clicking on this link: [On-line Test Results](#) or at:

http://hdmaster.com/testing/othertesting/ohio_xray/OH_XRAY_Home.htm.

You will be emailed and mailed your test results to the email/address in your record and/or a copy of your test results can be printed from the D&SDT GXMO webpage any time after your test has been officially scored. Your device must have an RTF reader to open emailed test results. Your test results will also be sent to your training program.

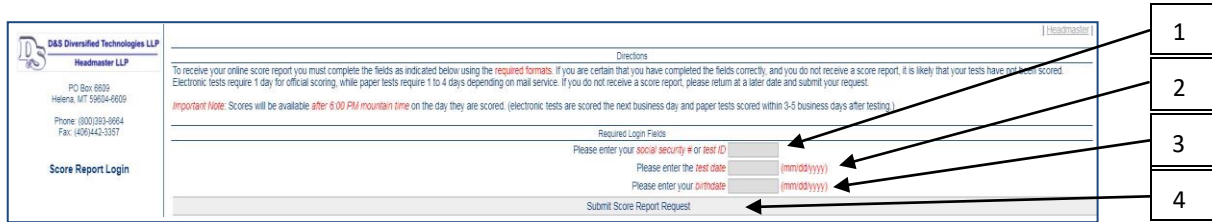
Checking Test Results On-Line

To check your test results online, click on this link [Online Test Results](#) :



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The screenshot shows a web form for logging in to request a score report. It includes a header with the company name and logo, a 'Score Report Login' link, and a 'Required Login Fields' section. The fields are: 'Please enter your social security # or test ID', 'Please enter the test date (mm/dd/yyyy)', 'Please enter your birthdate (mm/dd/yyyy)', and a 'Submit Score Report Request' button. Four numbered callouts (1-4) point to these fields respectively.

- 1) Type in your social security number
- 2) Type in your test date
- 3) Type in your birth date
- 4) Click on Submit Score Report Request

Test Attempts

You have **unlimited attempts** after successful completion of a didactic educational program to pass the exam.

The Knowledge Exam

The Knowledge Test Proctor (KTP) will hand out materials and give instructions for taking the Knowledge Test. You will have a maximum of ninety (90) minutes to complete the 60-question multiple choice Knowledge Test. After forty-five (45) minutes have elapsed, you will be told when fifteen (15) minutes remains. You may not ask questions about the content of the Knowledge Test (such as “What does this question mean?”). You must have a score of 70% or better to pass the Knowledge Test.

Electronic testing in WebETest®, using internet connected devices, is utilized at the GXMO test sites in Ohio. The Knowledge Test will be displayed on a screen for you to read and key/click/tap in your answers. Testing electronically (online) with WebETest® allows no later than next business day official scoring of tests.

Your Knowledge Test Proctor (KTP) will have scrap paper available for math related questions. The scrap paper must be turned in with your test when finished. All test materials must be left in the testing room. Anyone who removes or tries to remove materials or information from the testing room is subject to prosecution to the full extent of the law and will be reported to the Ohio Department of Health and will not be allowed to take the test again without ODH approval.

Knowledge Test Content

The knowledge test consists of sixty (60) multiple choice items/questions. Questions are selected from subject areas based on the ODH approved test plan and include questions from all the required categories. The subject areas and number of items are as follows:

Film Image	5	Radiation Safety	9
Digital Imaging	5	Radiographic Equipment	2
Image Quality	4	Technique	7
Operation Safety	6	X-Ray Beam	2
Patient Assessment	3	X-Ray Ionization	4
Patient Safety	6	X-Ray Tube Design	5
Primary Radio	2		

GXMO Vocabulary/Terminology

artifacts
atomic structure
attenuation
automatic exposure control
basic biologic effects of radiation exposure
beam quality
beam restrictors
beam restrictors contrast
contrast
contrast resolution
CR
CR imaging
definition of x-ray beam intensity
density
differences between digital and film
differential attenuation
digital basics
digital image: CR
digital post-processing
display qualities
distortion
dose limits
dosimeters
dosimetry
early/late effects
electromagnetic spectrum
exposure index
film basics
film handling and storage
film processing
filtration

general safety
general safety principles
genetic-fetal effects
geometric factors
grid contrast
grids
HIPAA
ID
image contrast
image evaluation
image scatter reduction
intensifying screens
interactions of matter
interactions with matter
inverse square law
ionization
kilovoltage
Law of Bergonie and Tribondeau
legal documentation
medical records
monitoring
motion
occupational dose limits
occupational protection
patient history
patient ID
patient safety
personnel shielding and protective barriers
pixel size
post-processing
practical considerations
practical considerations CR

pregnant workers
properties of x-rays
public dose limits
radiation safety
radiobiology
radiographic image formation
radiosensitivity
reduction of unnecessary dose
reduction of unnecessary patient control
relative safety
remnant radiation
safelights
scatter control
scatter reduction
scope of practice
sharpness of detail
shielding
sources of radiation
subject contrast
survey and monitoring requirements
technique charts
types of personal dosimeters
units of measure
visibility of detail
visibility of structure
x-ray beam quality
x-ray beam quantity
x-ray film
x-ray production
x-ray tube
x-ray tube construction

