



D&S Diversified Technologies LLP

Headmaster LLP

Ohio

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

EFFECTIVE: September 5, 2019 | UPDATED: May 8, 2020

Version 5.2

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		
D&S Diversified Technologies, LLP 333 Oakland Avenue Findlay, OH 45840 Email: hdmastereast@hdmaster.com Web Site: www.hdmaster.com	Monday through Friday 8:00am – 6:00pm	Phone #: (877) 851-2355 Fax #: (406) 442-3357
Ohio Department of Health 246 North High Street Columbus, OH 43215 Web Site: https://odh.ohio.gov/wps/portal/gov/odh/home	Monday through Friday 8:00am – 5:00pm	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 many times 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 11010X](#) (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/11010X.pdf.
- Provide a copy of your Clinical Course Certificate(s) or college transcripts.
- Pay the application fee, which can be found on the Form 11010X.
 - 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.

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 ID’s are:

- | | |
|--|---|
| <ul style="list-style-type: none">• Driver’s License• State ID• Military ID (<i>that meet all identification requirements</i>)• US Passport (<i>Foreign Passports and Passport Cards are not acceptable</i>)• Conceal Carry Permit | <p>Examples of a second form of ID are:</p> <ul style="list-style-type: none">• Library card• Utility bill• Credit/Debit card |
|--|---|

Please note: You will not be admitted for testing if you do not bring proper ID’s 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 1101OX (Testing Application and Payment Form) to schedule another exam date.
- Cell phones, smart watches, fitness monitors, electronic recording 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.
- 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.

Instructions for the Knowledge Test

Test instructions for the knowledge test will be provided in written and oral format in the waiting area when you sign-in for your test. Oral and PDF versions are also available anytime from your smart phone via the link on the D&S DT GXMO website at https://hdmaster.com/testing/othertesting/ohio_xray/OH_XRAY_Home.htm. These instructions detail the process and what you can expect during your exam. Please read through the instructions (or listen to them on your smart phone) **before** entering the knowledge test room. The instructions will be left in the waiting area during testing for you to refer to throughout your time at the test site. The Knowledge Test Proctor will ask you questions about the instructions you read when you enter the knowledge test room.

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.

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.

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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 retake for a minimum period of six (6) months.

Reschedule / Cancellation / 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&S DT's close of business:
Monday	On the previous: Tuesday by 6:00pm Eastern time
Tuesday	On the previous: Wednesday by 6:00pm Eastern time
Wednesday	On the previous: Thursday by 6:00pm Eastern time
Thursday	On the previous: Friday by 2:00pm Eastern time
Friday	On the previous: Monday by 6:00pm Eastern time
Saturday	On the previous: Tuesday by 6:00pm Eastern time
Sunday	On the previous: Tuesday by 6:00pm Eastern time

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

Scheduled in a Test Event

- 1) If you are scheduled in a test event, a request of testing fees paid must be made in writing at least one (1) full business day prior to your scheduled test event (excluding Saturdays, Sundays and Holidays). We accept faxed (419)422-8367 or emailed hdmastereast@hdmaster.com requests for cancellation. 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 submit a written cancellation request by close of business (D&SDT is open until 6:00pm Eastern Standard time Monday-Friday) the Thursday before your scheduled exam. The Friday before a scheduled test date on a Saturday, Sunday or Monday is considered the one full business day before your scheduled exam and a cancellation would not be granted on the Friday prior to your scheduled exam day.
- 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 testing fees with D&SDT. Any requests for refunds made beyond the 30 days of payment of testing fees with D&SDT will not be issued.

Not Scheduled in a Test Event

- 1) Refund requests must be made within thirty (30) days of payment of testing fees with D&SDT. Any requests for refunds made beyond the 30 days of payment of testing fees with D&SDT will not be issued.
- 2) Refund requests must be made in writing. We accept faxed (419)422-8367 or emailed hdmastereast@hdmaster.com refund requests. 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 fee.

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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 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**. Documentation can be faxed (419)422-8328 or emailed hdmastereast@hdmaster.com to D&SDT. When providing documentation for a no show exception, it is your responsibility to contact D&SDT to confirm that any documentation faxed or emailed has been received.

- **Car breakdown:** D&SDT must be contacted within one (1) business day via phone call. A faxed or emailed tow bill or other appropriate documentation must be submitted within **three (3) business days** of the missed exam date, if we do not receive the required documentation within the 3 business day time frame your No Show status will remain and you will have to pay your testing fees to schedule a new test date.
- **Medical emergency:** D&SDT must be contacted within one (1) business day via phone call. A faxed or emailed doctor's note must be submitted within **three (3) business days** of the missed exam date, if we do not receive the required documentation within the 3 business day time frame your No Show status will remain and you will have to pay your testing fees to schedule a new test date.
- **Death in the family:** D&SDT must be contacted within one (1) business day via phone call. A faxed or emailed obituary for **immediate family only** must be submitted within **seven (7) business days** from a missed exam date. (Immediate family is 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: [Online 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.

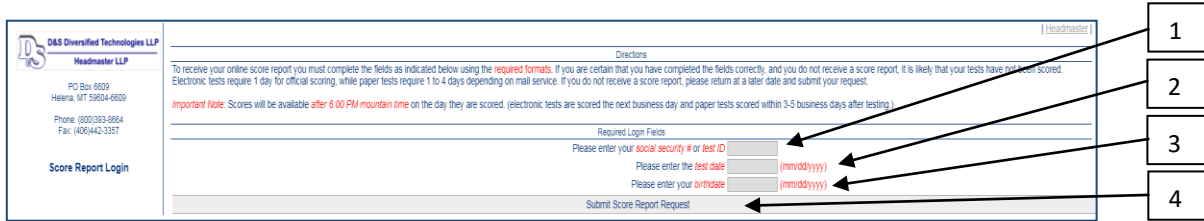
Checking Test Results On-Line

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



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The screenshot shows a web form titled "Score Report Login" from D&S Diversified Technologies LLP. The form includes a "Directions" section with instructions on how to receive a score report. Below this is a "Required Login Fields" section with three input fields: "Please enter your social security # or test ID", "Please enter the test date (mm/dd/yyyy)", and "Please enter your birthdate (mm/dd/yyyy)". At the bottom of the form is a "Submit Score Report Request" button. Four numbered callouts (1, 2, 3, 4) point to these specific elements: 1 points to the social security number field, 2 points to the test date field, 3 points to the birthdate field, and 4 points to the Submit Score Report Request button.

- 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		



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GXMO Vocabulary/Terminology

artifacts	grids	relative safety
atomic structure	HIPAA	remnant radiation
attenuation	ID	safelights
automatic exposure control	image artifact	scatter control
basic biologic effects of radiation exposure	image contrast	scatter reduction
beam quality	image evaluation	scope of practice
beam restrictors	image scatter reduction	sharpness of detail
beam restrictors contrast	intensifying screens	shielding
chemical safety	interactions of matter	sources of radiation
contrast	interactions with matter	subject contrast
contrast resolution	inverse square law	survey and monitoring requirements
CR	ionization	technique charts
definition of x-ray beam intensity	kilovoltage	types of personal dosimeters
density	Law of Bergonie and Tribondeau	units of measure
differences between digital and film	legal documentation	visibility of detail
differential attenuation	medical records	visibility of structure
digital basics	monitoring	x-ray beam quality
digital image: DR detectors	motion	x-ray beam quantity
digital image: CR	occupational dose limits	x-ray film
digital post-processing	occupational protection	x-ray production
display qualities	OSHA	x-ray tube
distortion	patient history	x-ray tube construction
dose limits	patient ID	
dosimeters	patient safety	
dosimetry	personnel shielding & protective barriers	
early/late effects	pixel size	
electromagnetic spectrum	post-processing	
exposure index	practical considerations	
film	practical considerations CR	
film basics	pregnant patient	
film handling and storage	pregnant workers	
film processing	processing quality control	
filtration	properties of x-rays	
general safety	public dose limits	
general safety principles	quality control (processor)	
genetic-fetal effects	radiobiology	
geometric factors	radio sensitivity	
grid contrast	reduction of unnecessary dose	
	reduction of unnecessary patient dosage	

