ASSE 6005 / 6010 /6020

2024 NFPA 99 COURSES

Course Date:June 10-13, 2025Course Location:Online over ZoomRegistration Deadline:May 20, 2025Course Language:English

ASSE 6005 MEDICAL GAS GENERALIST

Description: A 24-hour training course for medical gas system engineers, designers, and personnel in need of general medical gas system information.

Prerequisite: None

Cost: \$850.00 (MGA credentialing)

*This course provides general knowledge of medical gas and vacuum systems for the purpose of providing continuing education. Eligible individuals include any person with an interest in medical gas and vacuum systems and equipment.

ASSE 6010 MEDICAL GAS INSTALLER

Description: A 32-hour course for medical gas system installers, which includes both a written and a practical brazing test. Brazing credentials are re-issued on a six-month time interval to ensure continuity of brazing expertise.

Prerequisite: ASSE 6010 Para. 10-3.2.1 "The candidates for the ASSE 6010 certification shall have a minimum of four (4) years of documented practical experience in the field of installation of plumbing or mechanical piping systems.

Cost: \$1100.00 (MGA credentialing)

*This course is approved in the following states: Alabama, Alaska, Arkansas, Georgia, Colorado, Florida, Indiana, Iowa, Kansas, Louisiana, Michigan, Mississippi, New York, North Carolina, Oklahoma, South Carolina, Tennessee, Virginia, Wisconsin.
If you work in another state, please check with the governing authority in that state for course approval.

ASSE 6020 MEDICAL GAS INSPECTOR

Description: A 24-hour training course for medical gas system inspectors who inspect and review medical gas system installations for both governmental and private agencies.

Prerequisite: ASSE 6010 Para. 20-4.1.1 "The candidates for ASSE 6020 certification shall be employed by a governmental unit as a plumbing and/or mechanical inspector, or as an administrator of such inspectors, or be a person regularly involved in the design, inspection or verification of medical gas systems, or be a 6010 installer. Candidates shall have a minimum of two (2) years of documented practical experience or any combination of the above.

Cost: \$950.00 (MGA credentialing)

*This course applies to any individual who inspects the installation of medical gas and vacuum distribution systems. Medical gas systems and equipment covered in this standard include health care facilities within the scope of NFPA 99-2021, Health Care Facilities Code. Medical gas systems include vacuum systems.

COURSE SYNOPSIS

Within the three days of classroom time, the NFPA 99 document is covered in (9) segments with each segment reviewed by a corresponding worksheet of multiple-choice questions. A lecture session of each segment will be accompanied by a PowerPoint presentation, after which each student will complete the appropriate worksheet.

Each student will work on a (65) question pre-exam progressively over the three-day period as time permits in class, and/or in the evenings after class. Homework will be issued on days one and two, which will cover the material taught during the day by placing the student in some decision-making scenarios with written questions. Day four will consist of a 100-question written or computer exam. Time will be allocated on the afternoon of day three and/or four for the brazing instruction and test.**

Credentials will be issued by MGA or NITC, after successful completion.

Each student will receive a three-ring instruction binder, and a copy of the 2024 edition of NFPA 99. ASSE 6020 students will receive a copy of the ASSE 6000 Standard and the NFPA 55 book as well. ASSE 6005 students will receive a copy of the NFPA 55 as well as the NFPA 99. **The course for obtaining the ASSE 6005/6020 credential is the same except for brazing instruction and test. EMGS courses are taught by a credentialed ASSE 6050 instructor with over 20 years of training experience in the medical gas industry.

EMGS la

Please note: If you are attending a virtual class, we do require each student to have a computer (desktop or laptop), webcam and high speed internet connection.

Environmental & Medical Gas Services

103 Hunter Industrial Dr. Villa Rica, GA 30180

FAX: 770-459-1812 PHONE: 770-459-5920

ASSE 6005/6010/6020 MEDICAL GAS CERTIFICATION

COURSE OUTLINE

DAY ONE (8 hours)

- a. Chapter 3 definitions
- b. Chapter 4 fundamentals
- c. Chapter 5 sources (Manifolds, Bulk Cryogenic Systems, and Medical Air systems)

Homework (2 hours)

DAY THREE (8 hours)

- a. Chapter 5 Labeling and Testing
- b. chapter 5 Maintenance, Manufactured Assemblies, and Category 2 Systems
- c. Chapter 15 Dental Gas and Vacuum Systems
- d. Brazing Instruction and Q&A (6010 students only) Study Guide (2 hours)

DAY TWO (8 hours)

- a. Chapter 5 Sources (Medical Vacuum and WAGD Systems and Instrument Air Systems)
- b. Chapter 5 Valves
- c. Chapter 5 Outlets/Inlets
- d. Chapter 5 Alarms
- e. Chapter 5 Distribution Piping Homework (2 hours)

DAY FOUR (2-4 hours)

- a. Oral Question and Answer Session (if required)
- b. Computer Exam (requires webcam for virtual classes)

EQUIPMENT REQUIRED FOR ASSE 6010 COURSES ONLY

We recommend that each student have:

- (10) 1-1/2" Mueller W 01063 copper coupling fittings (standard type "L" plumbing fittings are acceptable and the fittings do not need to be cleaned for oxygen service). We highly recommend using these ring type couplings rather than dimple type.
- Minimum 10' of copper tubing type "L" size 1-1/2" (standard copper, does not need to be cleaned and capped). The 10' of 1-1/2" copper tubing can be cut into (10) 7" lengths, and (10) 5" lengths for placement in our brazing jig. Please cut pipe with a tubing cutter. This will expedite your practice and brazing procedures. Fittings and pipe need to have no oxidation present.
- (1) Pound or (28) sticks of BCUP 5 silver brazing rods with a minimum of 15% silver content (substitute 2-15% is not acceptable).

ASSE 6005, 6010 and 6020 training courses are taught by Environmental & Medical Gas Services.

Credentials are issued from a "Recognized third party certification agency" either NITC (National Inspection Testing Certification) or MGA, LLC (Medical Gas Accreditation) for compliance with Section 1-1.3, 5-4.1.1, 10-3.2.3, and 20-4.1.2 of the 2021 edition of ASSE/IAPMO/ANSI Series 6000 Standard. For MGA credentialing, please complete the appropriate ASSE 6000 application. For NITC credentialing, please complete the NITC application. We cannot offer NITC testing with our virtual classes.

Please note: Virtual Testing is MGA credentialing only.

In the state of Georgia, a plumbing license is required to install medical gas. You can gain your medical gas license before your plumbing license or vice versa but you must hold both. Other states may or may not require this. If you are unsure, please check with your state authority for state requirements.



Please note: If you are attending a virtual class, you can either travel to our office to braze or braze at your own facility as long as you have two witnesses, one of whom should be an officer of your company.

Environmental & Medical Gas Services

103 Hunter Industrial Dr. Villa Rica, GA 30180

FAX: 770-459-1812 PHONE: 770-459-5920



COURSE DATE:	June 10-13, 2025			
TIME:	8:30 AM			
LOCATION:	Online over Zoom			
REGISTRATION DEADLINE: May 20, 2025				
Return application to idarden@emgsi.com				

COMPANY			APPLICANT
COMPANY N	AME:		NAME:
MAILING ADE	DRESS:		PHONE:
CITY:	STATE:	ZIP:	EMAIL:
PHONE:			
CONTACT PE	RSON:		CONTACT EMAIL:
Contact person	will receive future renev	val information. If th	nis is same as applicant, leave blank.
and vacuum sy in medical gas	estems for the purpose of and vacuum systems and vacuum systems and the Information	f providing continuind equipment." on Sheet for MGA	dard states: "This standard provides general knowledge of medical gas ng education. Eligible individuals include any person with an interest Exams and agree to abide by the rules listed.
□ I ha	ve or will have comple	eted the 24-hour o	course required to fulfill this certification.
Please note: In order to keep this license valid, a short course and test must be completed every 3-years when a new NFPA 99 edition is released. This course and test will cover changes made from the previous edition. It is the license holders responsibility to check their expiration date and schedule testing, although MGA will send an email to currently licensed individuals at least once when a new NFPA 99 edition is released.			
SIGNATURE (OF APPLICANT:		DATE:

Medical Gas Licensing WEBSITE: www.medgaslicense.com

FAX: 678-498-2749 MAIL: PO Box 820

PHONE: 770-783-3630 **Villa Rica, GA 30180**



ASSE 6010

Exam Application

COURSE DATE: June 10-13, 2025

TIME: 8:30 AM

LOCATION: Online over Zoom

REGISTRATION DEADLINE: May 20, 2025

Return application to jdarden@emgsi.com

COMPANY		APPLICANT			
COMPANY NAME:		NAME:	NAME:		
MAILING ADI	DRESS:	PHONE:			
CITY:	STATE: ZIP:	EMAIL:			
PHONE:					
CONTACT PE	RSON:	CONTACT EMA	AIL:		
Contact persoi	n will receive future renewal informat	ion. If this is same as applicant, leave	e blank.		
have a minimo	um of four (4) years of documented p	ractical experience in the field of ins	es for the ASSE 6010 certification shall tallation of plumbing or mechanical		
Employer, (City & Phone Number		Dates		
	-				
☐ I ha ☐ I ur ins	99 edition is released. This course a	-hour course required to fulfill th ch as Georgia), a plumbing licens a short course and test must be comp and test will cover changes made fro	is certification. The may be required in order to solution order to solution order to solution order to solution. It is the license solution.		
			ng, although MGA will send an email to is released. Brazing Continuity must also		
SIGNATURE	OF APPLICANT:	D <i>i</i>	ATE:		

Medical Gas Licensing WEBSITE: www.medgaslicense.com

FAX: 678-498-2749 MAIL: PO Box 820

PHONE: 770-783-3630 **Villa Rica, GA 30180**





COURSE DATE: June 10-13, 2025

TIME: 8:30 AM

LOCATION: Online over Zoom

REGISTRATION DEADLINE: May 20, 2025

Return application to jdarden@emgsi.com

COMPANY			APPLICANT	
COMPANY N	AME:		NAME:	
MAILING ADI	DRESS:		PHONE:	
CITY:	STATE:	ZIP:	EMAIL:	
PHONE:				
CONTACT PE	RSON:		CONTACT EM/	AIL:
Contact persor	n will receive future renewal	information. If this is	s same as applicant, leave	e blank.
employed by a person regular have a minimu	governmental unit as a plu	mbing and/or mecho spection or verification nented practical expo	anical inspector, or as ar on of medical gas system erience or any combinati	tes for the ASSE 6020 certification shall be administrator of such inspectors, or be a as, or be a 6010 installer. Candidates shall ion of the above."
Employer, 0	City & Phone Number			Dates
	ave read the Information s			
Please note:	lease note: In order to keep this license valid, a short course and test must be completed every 3-years when a new NFPA 99 edition is released. This course and test will cover changes made from the previous edition. It is the license holders responsibility to check their expiration date and schedule testing, although MGA will send an email to currently licensed individuals at least once when a new NFPA 99 edition is released.			
SIGNATURE (OF APPLICANT:		D.	ATE:

Medical Gas Licensing WEBSITE: www.medgaslicense.com

FAX: 678-498-2749 MAIL: PO Box 820

PHONE: 770-783-3630 **Villa Rica, GA 30180**





Environmental & Medical Gas Services

103 Hunter Industrial Dr. Villa Rica, GA 30180

Ph. (770) 459-5920 Fax (770) 459-1812

TRAINING CREDIT CARD AUTHORIZATION FORM

MasterCard:	Visa:	Discover:	Amex:
Card Number:			
Expiration Date:			
Name as it appears on	credit card:		
Billing Address:			
3-or 4-digit security co	ode:		
Total amount authorize	ed to charge:	-	
Cardholder signature:			
Email address for rece	ipt:		
		ASSE 6005 - \$850	
		ASSE 6010 - \$1100	
		ASSE 6020 - \$950	
		ASSE 6040 - \$1100 loss materials NEDA 00 book fir	and tost
	An pricing includes cl	lass materials, NFPA 99 book, fin	iai test

Please note: Payment is due by the registration deadline. If attendance is canceled after this date, we will apply payment towards another class held within 12 months. It is the applicant's responsibility to keep track of class credit for upcoming courses.

and supplemental books or standards depending upon certification.

Does <u>not</u> include braze materials for ASSE 6010.



MGA Exam and Licensing Information

ASSE 6000 Passing Exam Grades:

ASSE 6005 – 70%

ASSE 6010 - 70%

ASSE 6020 - 70%

ASSE 6030 – 85%

ASSE 6035 - 85%

ASSE 6040 - 70%

ASSE 6050 - 85%

ASSE 6060 - 70%

- To qualify for the ASSE 6005 certification, the candidate must meet the requirements
 of the ASSE 6005 Standard which are as follows:
 - o Have a general interest in medical gas and vacuum systems and equipment.
 - Complete a 24-hour course taught by an ASSE 6050 certified instructor.
 - Successfully complete a written or computer exam.
- To qualify for the ASSE 6010 certification, the candidate must meet the requirements of the ASSE 6010 Standard which are as follows:
 - ASSE 6010 2021 Para. 10-3.2.1 "The candidates for the ASSE 6010 certification shall have a minimum of four (4) years of documented practical experience in the field of installation of plumbing or mechanical piping systems."
 - o Complete a 32- hour course taught by an ASSE 6050 certified instructor.
 - o Successfully complete a written or computer exam.
 - o Successfully complete a practical brazing exam.



- In addition, most states require that medical gas installers hold a journeyman or master plumbing license. If you are in the process of gaining your plumbing license, the ASSE 6010 certification can typically be added after you've gained your plumbing license even if this course is completed first.
- o NOTE: The initial MGA brazing procedure specification will qualify brazers on ¼" to 3" tubing. The initial brazing procedure is required for all installers. If qualification for larger pipe sizes is required, MGA also has a brazing procedure specification for qualifying brazers on ¾" to 6" tubing at an additional cost.
- To qualify for the ASSE 6020 certification, the candidate must meet the requirements of the ASSE 6020 Standard which are as follows:
 - O ASSE 6020 2021 Para. 20-4.1.1 "The candidates for ASSE 6020 certification shall be employed by a governmental unit as a plumbing and/or mechanical inspector, or as an administrator of such inspectors, or be a person regularly involved in the design, inspection or verification of medical gas systems, or be a 6010 installer. Candidates shall have a minimum of two (2) years of documented practical experience or any combination of the above."
 - o Complete a 24-hour course taught by an ASSE 6050 certified instructor.
 - Successfully complete a written or computer exam.
- To qualify for the ASSE 6030 certification, the candidate must meet the requirements of the ASSE 6030 Standard which are as follows:
 - ASSE 6030 2021 Para. 30-3.2.1 "The candidates for ASSE 6030 certification shall have a minimum of two (2) years of documented practical experience in the verification of medical gas systems."
 - o Complete a 32-hour course taught by an ASSE 6050 certified instructor.
 - o Successfully complete a written or computer exam.
 - Successfully complete a practical exam.



ACCREDITATION

- To qualify for the ASSE 6035 certification, the candidate must meet the requirements of the ASSE 6035 Standard which are as follows:
 - ASSE 6035 2021 Para. 35-3.2.1 "The candidates for ASSE 6035 certification shall have a minimum of two (2) years of documented practical experience in the verification and/or inspection of bulk medical gas/cryogenic fluid central supply systems."
 - Complete a 32-hour course taught by an ASSE 6050 certified instructor OR hold an ASSE 6030 medical gas verifier's credential and complete an additional minimum 16-hour training course covering bulk medical gas/cryogenic fluid supply systems, the FDA CGMPs, CGA M-1 and applicable sections of ASSE/IAPMO/ ANSI Series 6000, NFPA 99 and NFPA 55.
 - Successfully complete a written or computer exam.
 - Successfully complete a practical exam.
- To qualify for the ASSE 6040 certification, the candidate must meet the requirements of the ASSE 6040 Standard which are as follows:
 - ASSE 6040 2021 Para. 40-3.2.1 "The candidates for ASSE 6040 certification shall be employed or contracted by a health care facility or be actively engaged in working with medical gas systems and shall have one (1) year minimum experience in the maintenance of the medical gas and vacuum systems."
 - o Complete a 24-hour course taught by an ASSE 6050 certified instructor.
 - Successfully complete a written or computer exam.
- To qualify for the ASSE 6050 certification, the candidate must meet the requirements of the ASSE 6050 Standard which are as follows:
 - ASSE 6050 2021 Para. 50-3.2.1 "The candidates for ASSE 6050 certification shall have a minimum of ten (10) years of documented experience in the installation of plumbing or mechanical piping systems, including a minimum of two (2) years of documented experience in the installation of medical gas and vacuum systems. Instructors shall have a minimum of two (2) years of



documented practical teaching experience. Instructors shall possess a current medical gas systems installer certification in compliance with ASSE Standard 6010."

- o Complete a 40-hour course taught by an ASSE 6050 certified instructor.
- Successfully complete a written or computer exam.
- To qualify for the ASSE 6060 certification, the candidate must meet the requirements of the ASSE 6060 Standard which are as follows:
 - ASSE 6060 2021 Para. 60-3.2.1 "The candidates for ASSE 6060 certification shall have two (2) years of documented practical experience in the mechanical and plumbing systems industry and require practical knowledge of the design of medical gas and vacuum systems."
 - o Complete a 32-hour course taught by an ASSE 6050 certified instructor.
 - Successfully complete a written or computer exam.

Failed Exams:

If you do not pass your exam on the first attempt, you may retest twice more with no additional exam fees. MGA will not give information on specific missed questions but will send you a list of NFPA 99 categories and the number of questions missed within each category.

Notes: All MGA certification expirations will occur on January 31st or July 31st.



ASSE 6000 Exam Materials Allowed:

6005

- 2021 NFPA 99
- 2020 NFPA 55
- 2018 ASSE 6000

6010

- 2021 NFPA 99
- 2018 ASSE 6000

6020

- 2021 NFPA 99
- 2020 NFPA 55
- 2018 ASSE 6000

6030

- 2021 NFPA 99
- 2020 NFPA 55
- 2018 ASSE 6000
- 2018 CGA M-1

<u>6035</u>

- 2021 NFPA 99
- 2020 NFPA 55
- 2018 ASSE 6000
- 2018 CGA M-1
- 2020 CGA P-18
- 2018 CGA E-10
- 2018 CGA G-4.1
- 21 CFR part 210, 211 and 280

6040

- 2021 NFPA 99
- 2018 ASSE 6000

6050

- 2021 NFPA 99
- 2020 NFPA 55
- 2018 CGA M-1
- 2018 ASSE 6000

6060

- 2021 NFPA 99
- 2020 NFPA 55
- 2018 ASSE 6000
- 2019 ASPE Design Guide, Vol 3
- 2018 FGI Guidelines for Hospitals

^{*}For recertification exams only, supplemental training literature is also allowed.



Appeals Process:

Appeals to any certification rule or procedure must be made in writing and sent via US mail, email or fax. A written response from MGA will be returned within 30 days.

Inappropriate Representation:

If any MGA license holder misrepresents their license in any way, to include falsifying the scope of their certification or ability, the license can be revoked.

Recertification:

ASSE 6000 requires a minimum 4-hour training course and short exam to subsequent editions of NFPA 99. This training must be conducted by an ASSE 6050 instructor. MGA offers recertification exams for all MGA credentialed personnel to meet this requirement after proof of a 4-hour training course.

If an MGA certified license holder neglects to take the required course and test on two subsequent NFPA 99 editions, their license may be revoked, and a new initial certification course may be required.

Braze Renewal:

Per NFPA 99, para. 5.1.10.11.11.7 "Performance qualifications of brazers shall remain in effect indefinitely, unless the brazer does not braze with the qualified procedure for a period exceeding 6 months or there is a specific reason to question the ability of the brazer." All ASSE 6010 license holders must have a current ASSE 6010 certification and braze certification for the license to be valid.

MGA sends emails each December and July with braze renewal affidavits and payment forms, due back by January 31st and July 31st, respectively. If the installers 6010 and braze certifications are current, they will receive an updated license. There is no charge for the first braze renewal since it will fall within the first 6 months since initial certification.



MGA License Transfers:

MGA will accept license transfers from all recognized medical gas credentialing agencies on a case-by-case basis. To apply for a transfer, please send the appropriate transfer form with a copy of your most current license and a head shot photo.

If your license is not current, you will be required to renew any lapsed certifications through MGA before a new license is issued.

For all ASSE 6010 license transfers: If your initial braze qualification procedure was performed on 1 $\frac{1}{2}$ " tubing, you will be qualified for $\frac{1}{4}$ " – 3" tubing under the initial MGA brazing procedure specification. If you also performed a test on 3" tubing, you will be qualified under the MGA larger pipe size brazing procedure specification for $\frac{3}{4}$ " – 6" tubing.



Information Sheet for MGA Exams

- To qualify for the **ASSE 6005** exam, the candidate must meet the requirements of the **ASSE 6005** which are as follows:
 - 1. Have a general interest in medical gas and vacuum systems and equipment.
 - 2. Complete a 24-hour course taught by an ASSE 6050 certified instructor.
 - 3. Successfully complete a written or computer exam.
- To qualify for **the ASSE 6010** exam, the candidate must meet the requirements of the **ASSE 6010** which are as follows:
 - 1. ASSE 6010 2021 Para. 10-3.2.1 "The candidates for the ASSE 6010 certification shall have a minimum of four (4) years of documented practical experience in the field of installation of plumbing or mechanical piping systems."
 - 2. Complete a 32- hour course taught by an ASSE 6050 certified instructor.
 - 3. Successfully complete a written or computer exam.
 - 4. Successfully complete a practical brazing exam.
 - 5. In addition, most states require that medical gas installers hold a journeyman or master plumbing license. If you are in the process of gaining your plumbing license, the ASSE 6010 certification can typically be added after you've gained your plumbing license even if this course is completed first.
- To qualify for the **ASSE 6020** exam, the candidate must meet the requirements of the **ASSE 6020** which are as follows:
 - 1. ASSE 6020 2021 Para. 20-4.1.1 "The candidates for ASSE 6020 certification shall be employed by a governmental unit as a plumbing and/or mechanical inspector, or as an administrator of such inspectors, or be a person regularly involved in the design, inspection or verification of medical gas systems, or be a 6010 installer. Candidates shall have a minimum of two (2) years of documented practical experience or any combination of the above."
 - 2. Complete a 24-hour course taught by an ASSE 6050 certified instructor.
 - 3. Successfully complete a written or computer exam.
- To qualify for the **ASSE 6040** exam, the candidate must meet the requirements of the **ASSE 6040** which are as follows:
 - 1. ASSE 6040 2021 Para. 40-3.2.1 "The candidates for ASSE 6040 certification shall be employed or contracted by a health care facility or be actively engaged in working with medical gas systems and shall have one (1) year minimum experience in the maintenance of the medical gas and vacuum systems."
 - 2. Complete a 24-hour course taught by an ASSE 6050 certified instructor.
 - 3. Successfully complete a written or computer exam.



Appeals Process:

Appeals to any certification rule or procedure must be made in writing and sent via US mail, email or fax. A written response from MGA will be returned within 30 days.

Suspension or Revocation Process:

For ASSE 6010 licenses: Brazing must be performed every six months and a sworn affidavit returned stating that the installer has used the brazing technique within the previous six months at least once. These can be returned late provided that the installer is willing to sign sworn affidavits that the brazing process was actually performed every six months. However, if no affidavits have been returned for a period of (24) months, the installer must submit a vertical brazed coupon for testing in order to reinstate his brazing certification.

For ASSE 6005, 6010, 6020 and 6040 licenses: If a license holder neglects to take the required course and test on two subsequent NFPA 99 editions, his license may be revoked, and a new course may be required.

<u>Inappropriate Representation:</u>

If any MGA license holder misrepresents his license in any way, to include falsifying the scope of his certification or ability, his license can be revoked.

Test Rules:

For all virtual exams administered, a webcam must be visible by the proctor for the entire duration of the exam. If the webcam is not visible for the entire exam, it is at the proctor's discretion to close the exam before it's completed and have the student retake at a later date.

No cell phones or other types of electronic devices are permitted to be used during the exam. The only material that should be available to the student is a copy of the NFPA 99 book. It is at the proctor's discretion to ask the student to remove any additional materials.



Exam Grade Requirements per ASSE 6000:

ASSE 6005 Passing Grade – 70%

ASSE 6010 Passing Grade – 70%

ASSE 6020 Passing Grade – 75%

ASSE 6030 Passing Grade – 85%

ASSE 6035 Passing Grade – 85%

ASSE 6040 Passing Grade – 70%

ASSE 6050 Passing Grade – 85%

Recertification Exam Grade Requirements:

ASSE 6000 (for ASSE 6005, 6010, 6020 and 6040) - 70%

ASSE 6030 - 85%

ASSE 6035 - 85%

ASSE 6050 - 85%