

MIMGT



MED Institute of Medical Gas Technology



# MED INSTITUTE OF MEDICAL GAS TECHNOLOGY (MIMGT)

Training Partner of  
Healthcare Sector Skill Council  
Govt. of India



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# ABOUT **Us**

MED Institute of Medical Gas Technology (MIMGT) is a certified company/institution committed to provide quality services and products related to medical gas pipeline systems (MGPS) and Biomedical Engineering, to enhance quality and safety of healthcare delivery in India. MIMGT offering highly focused skill development programs in Medical Gas Pipeline Systems. We conduct certification programs to produce skilled professionals in MGPS to fulfil growing demands of the healthcare industry. We install and maintain medical gas pipeline infrastructure at hospitals and upgrade the existing ones, in compliance to inter national quality standards.

## OUR **Vision**

To establish a technical institution with advanced infrastructure facilities and well-qualified faculty that contributes skilled professionals via education and extensive training in medical gas technology and allied areas of Biomedical Engineering, for catering the demands of healthcare industry.



## OUR **Mission**

- /// To form a skilled and certified group of resourceful faculties who is competent in advanced technologies concerned with medical gas technology and allied areas of Biomedical Engineering
- /// To build advanced laboratory facilities and infrastructure related to medical gas technology and allied areas of Biomedical Engineering
- /// To collaborate with leading hospitals, healthcare industries, and biomedical companies for resource sharing and offering collaborative academic/skill development programmes
- /// To establish a research laboratory for the indigenous development of novel technologies that can solve practical issues in medicine

# ABOUT Healthcare Sector Skill

The Healthcare Sector Skill Council (HSSC) is a “not-for profit” organization, created by National Skill Development Corporation (NSDC), Confederation of Indian Industries (CII) and leading healthcare service providers representing both public and private sector in the country. The objective of the HSSC is to create ecosystem for quality vocational education in allied health in the country. One of the important component is, development of occupational standards for allied health, accreditation protocols and accreditation of training institutes based on sound principles, third party assessment of trainees and certification.



# ABOUT Medical Gas Pipeline Systems



The Medical Gas Pipeline System (MGPS) refers to a complete standalone engineering infrastructure that facilitates continuous availability of medical gases required in a hospital. The medical gases include oxygen, compressed air, nitrous oxide, and carbon dioxide. The MGPS supplies vacuum also. The fact that oxygen from MGPS is used in the life supporting ventilators shows its paramount importance. The nitrous oxide is used in anesthesia. Carbon dioxide supply is necessary during endoscopic surgery. Vacuum is necessary in the suction apparatus to remove pooled secretions and blood.

Supplying accurate composition/ concentration (purity) of medical gases at the right pressure forms the basis for the functional operation of ventilators and anesthesia machines in operation theatres, in intensive care units and treatment rooms. Unexpected breakdown of the MGPS is catastrophic as it will throw the patients under critical care to extreme risk. Mishandling and improper maintenance of MGPS may cause fire accidents as the medical gases are highly inflammable. Any inadvertent changes in the purity and pressure of supplied gases may end up with serious medical errors and casualty. Hence, there is an urgent need for trained MGPS taskforce in our country and across the globe.



# COURSES Offered

**CERTIFICATE ON MEDICAL  
GAS PLANT ROOM TECHNIQUES**  
(LEVEL: PLANT ROOM TECHNICIAN)

**Duration** : 6 months (including on-site training)

**Eligibility** : A pass in matriculation/ SSLC or equivalent with 50% of aggregate marks

**Intake** : 25 Nos

**ADVANCED CERTIFICATE ON  
MEDICAL GAS PIPELINE SYSTEMS**  
(LEVEL: SENIOR TECHNICIAN)

**Duration** : 6 months (including on-site training)

**Eligibility** : A pass in National Council for Vocational Training (NCVT) or Kerala Government Examination (KGCE) certification in refrigeration and air conditioning, fitter, plumber or equivalent with 50% of aggregate marks / Pass in plus two, Pass in THSLC

**Intake** : 25 Nos

**POST DIPLOMA CERTIFICATE ON  
MEDICAL GAS PIPELINE SYSTEMS**  
(LEVEL: SUPERVISOR)

**Duration** : 6 months (including on-site training)

**Eligibility** : A pass in three year diploma in Engineering in Mechanical Engineering / Biomedical Engineering / Medical Electronics / Instrumentation or equivalent with 50% aggregate marks

**Intake** : 25 Nos

## Program Objective

To produce a well-motivated taskforce of certified medical gas pipeline system professionals who can enhance the quality of healthcare delivery through their ethical practice.

## Program/Learning Outcomes

The professions who complete the certificate programme on medical gas pipeline systems will be able to;

- ▶ **PO1:** Become competent in the installation and maintenance of medical gas pipeline systems with good knowledge of the applicable standards, laws, codes, rules, regulations pertaining to medical gas and vacuum systems and related documentation.
- ▶ **PO2:** Practice as a skilled technician who can install and maintain medical gas pipeline systems in hospitals.
- ▶ **PO3:** Become entrepreneurs by initiating start-up companies involved in marketing, installation, and maintenance of medical gas pipeline systems, thereby creating employment opportunities in the country.
- ▶ **PO4:** Upgrade the knowledge and skill by pursuing advanced level certifications that are internationally accredited.
- ▶ **PO5:** Train healthcare and paramedical professionals in the area of medical gas pipeline systems.
- ▶ **PO6:** Make significant contributions towards improving the quality and safety of healthcare delivery as a token of social commitment.

# Curriculum

## Theory courses

15 Credits and 144 Instructional Hours

No.	Course	Credits	Hours
1.	Hospital Engineering	2.5	24
2.	Principle and operation of MGPS	2.5	24
3.	Design & installation of MGPS	2.5	24
4.	MGPS standards & protocols	2.5	24
5.	Professional communication & documentation	2.5	24
6.	Computer applications	2.5	24

## Lab courses

3 Credits and 36 Instructional Hours

No.	Course	Credits	Hours
1.	Hospital Engineering Lab	1	12
2.	MGPS Lab	1	12
3.	Computer applications Lab	1	12

## Internship / Training

12 Credits and 540 Hours

No.	Course	Credits	Hours
1.	Training/internship in MGPS companies/hospitals	12	540

“A leader is the one who knows the way,  
goes the way, and shows the way”

- John C Maxwell

## Managing Director



**Mr. Eldhose T.K.** is a trained professional and entrepreneur in the area of MGPS. He is a veteran in MGPS with more than 25 years of experience in design, costing, installation, operation and maintenance of MGPS at leading hospitals in south India. He has done many international certification programs on MGPS offered by reputed agencies like BOC Healthcare U.K. He has been a consultant in many MGPS projects. He has profound knowledge in MGPS standards, namely, HTM 02-01, HTM 08-06, FGI and ISO 7396-1:2016 Medical gas pipeline systems - Part 1: Pipeline systems for compressed medical gases and vacuum. MIMGT is an organization under his prudential administration.

## Chief Technical Advisor

**Dr. Justin Joseph** is a Biomedical Engineer by training. He started his technical education with a three-year diploma in Medical Electronics from the model poly technic college, Painavu, Kerala. After receiving diploma and later B.E. in Electronics & Instrumentation from Anna University Chennai, he completed a Post Graduate Certificate in Medical Equipment Maintenance from Apollo Hospital, Chennai. After the P.G. Certificate, he got trained in medical equipment maintenance from the Department of Medical Electronics, Advanced Training Institute for Electronics and Process Instrumentation, Hyderabad, Govt. of India. He pursued his M. Tech degree from Department of Biomedical Engg., Manipal Institute of Technology and Ph.D. from the department of Biomedical Engg., National Institute of Technology, Raipur. Currently, he is an Assistant Professor at the School of Bioengineering, VIT University, Bhopal. Before joining VIT he had been a postdoctoral fellow at Medical Ultrasound Engineering (MUSE) Lab, Indian Institute of Technology, Gandhinagar (IITGn). Dr. Justin is a life member of Indian Unit for Pattern Recognition and Artificial Intelligence (IUPRAI), Indian Statistical Institute (ISI), Kolkata, Society for Biomaterials & Artificial Organs (India) and Biomedical Engineering Society of India. He has authored 26 research papers in Biomedical Engineering and allied areas.



# OUR Facilities & Features

- ▶▶ Memorandum of understanding with industries and hospitals for placements
- ▶▶ Well-qualified and highly resourceful faculty
- ▶▶ Fully air-conditioned and luxuriously-furnished classrooms
- ▶▶ ICT-enabled instructional facility with digital teaching aids
- ▶▶ Fully equipped workshops and sophisticated laboratories
- ▶▶ Reading facility with latest text books, journals and periodicals related to MGPS
- ▶▶ Free access to high-speed Wi-Fi



## MGPS Placement Opportunities

The MIMGT is a sister concern of the company Metro Medi Systems, Kochi. Metro Medi Systems have been involved in designing, installing and maintaining a wide range of medical gas systems at leading public/private sector hospitals in south India, over 20 years. The company has more than 230 installations in South India. The MIMGT has signed a formal MOU with the Metro Medi Systems for student training and placement. In addition, major employers of the certified professionals in MGPS are super/multispecialty hospitals and companies involved in the erection and maintenance of MGPS. An opportunity to start own companies and establish themselves as entrepreneurs is also wide open for the trained MGPS professionals.



## MIMGT

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