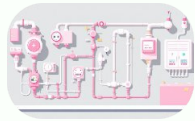




# Medical Gas Pipeline System (MGPS) Training Course

Organized by Atulit Biswas Swasth Evam Shikshan Samiti — practical, accredited training for technicians and hospital technical teams.

# Course Objectives



## Understand MGPS Structure

Learn system architecture: sources, manifolds, pipelines, alarms, terminal units, and labeling conventions used in hospitals.



## Train Technicians

Provide practical skills for ITI Electrical & Mechanical trainees to install, commission, and maintain MGPS components safely and effectively.



## Apply Safety Standards

Cover national and hospital standards, color-coding, labeling, leak detection, and inspection routines to ensure regulatory compliance.



## Emergency Response

Teach SOPs for outages, pipeline leaks, manifold failures, and coordinated responses with clinical staff to minimize patient risk.



PRIMARY

SECONDARY

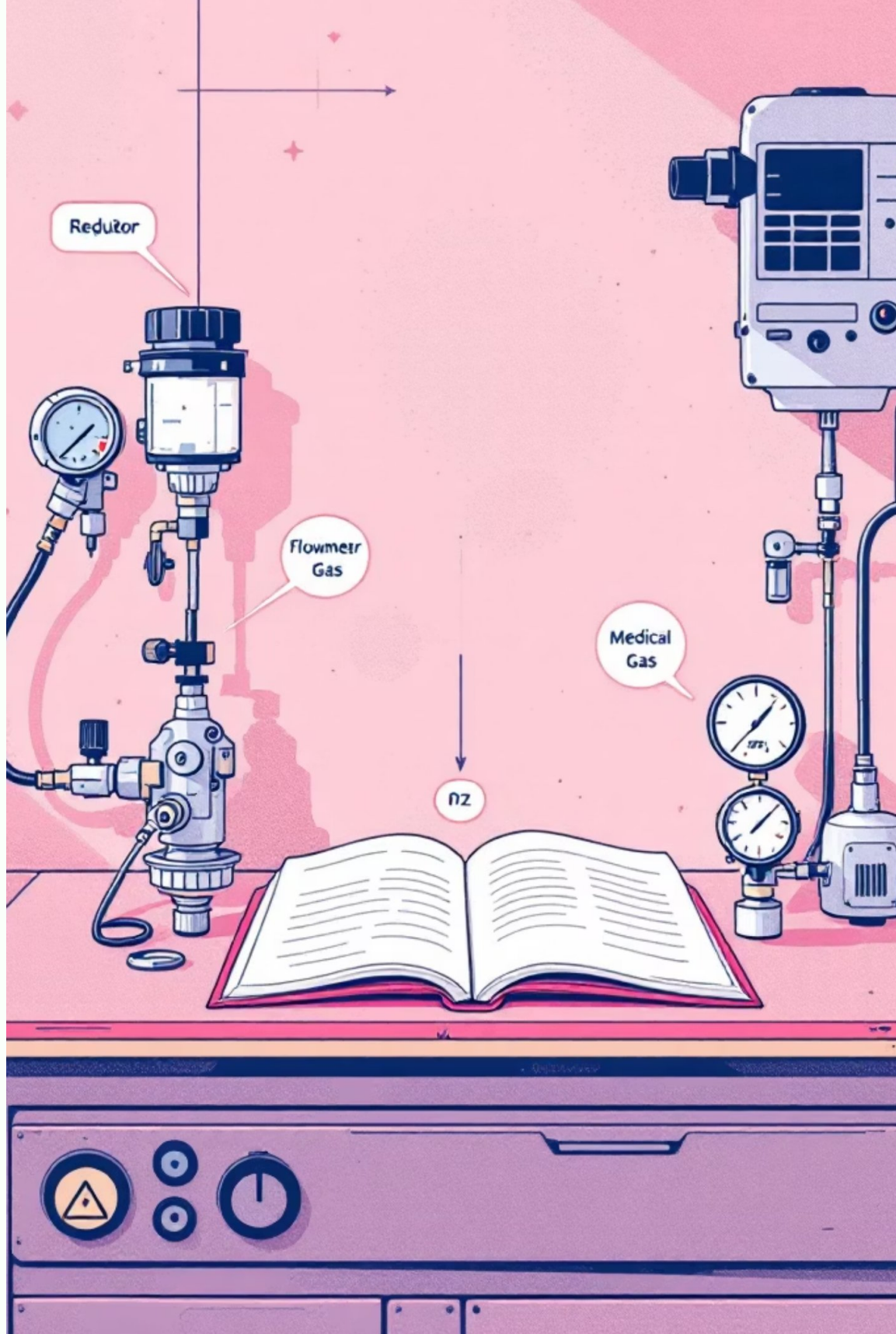
## Target Audience

Focused training designed for:

- ITI Electrical trainees — wiring, alarms, power & control systems for MGPS
- ITI Mechanical trainees — piping, manifolds, regulators, flow and pressure management
- Hospital technical staff — biomedical engineers, maintenance technicians, facility managers



Ideal for candidates seeking hospital technical roles or certification in medical gas systems.



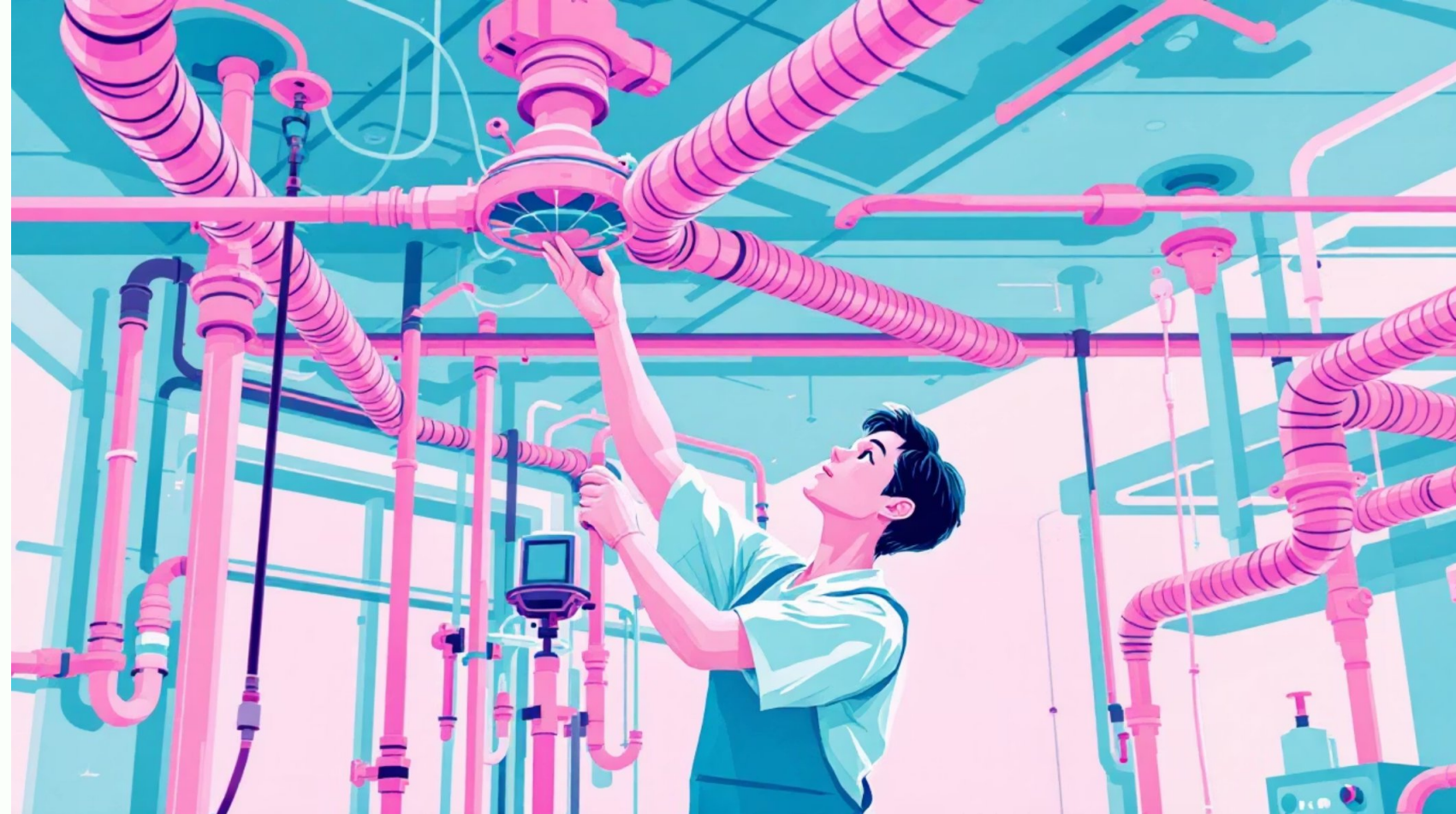
# Syllabus — Part 1: Basics

## Module 1 — Introduction

Overview of medical gases, clinical uses (O<sub>2</sub>, Medical Air, Vacuum), system classifications, standards and nomenclature.

## Module 2 — Equipment & Components

Detailed study of sources (cylinders, bulk liquid oxygen, central plants), manifolds, alarms, regulators, pipe materials, fittings and terminal units.



## Syllabus — Part 2: Technical

### Module 3 — Installation & Testing

Pipe layout planning, brazing/welding best practices, pressure testing, purging procedures, leak testing, and commissioning checklists.

### Module 4 — Operation & Maintenance

Routine maintenance schedules, alarm response, preventive care, spare part management, calibration of gauges and flow devices, and documentation.



# Safety & Emergency (Module 5)

## Safety Management

Risk assessment, permit-to-work, confined space protocols, PPE requirements, and routine safety audits.

## Fire Precautions

Minimize ignition sources near pipelines, fire-rated penetrations, suppression planning, and coordination with hospital fire teams.

## Standard Operating Procedures

Step-by-step SOPs for shutdowns, leak isolation, alarm triage, reporting, and handover documentation to clinical teams.

Each topic includes hands-on drills, role-played emergency scenarios, and assessment of response times and decision-making.



# Duration & Methodology

Course Component	Duration (Days)	Mode
Basic Training	20	Theory + Demo
Advanced Technical	10	Hands-on Lab
Practical Internship	30	On-site Practice
<b>Total</b>	<b>60</b>	

Theory

Demonstration

Site Visit

Examination

Methodology blends classroom instruction, live demonstrations, supervised hospital rotations, and formal assessments to validate competency.

# Benefits & Special Notes



## Certification

Participants receive an accredited certificate on successful completion and assessment—recognized by partnering hospitals.

## Job Assistance

Placement support, resume review, and direct introductions to hospital maintenance departments and medical equipment vendors.

## Practical Checklist

Graduates receive a field-ready checklist: installation, testing, commissioning, maintenance, and emergency SOP quick-reference.

Priority given to ITI Mechanical & Electrical candidates.



# Assessment & Credentialing

Competency measured through:

- Written theory exam covering standards and safety (pass mark 70%)
- Practical installation and leak-test exercise
- Onsite performance during internship with mentor evaluation

☐ Certificate issued after meeting knowledge and practical skill thresholds; re-certification options available annually.

# Next Steps & Contact

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## Enroll

Contact Atulit Biswas Swasth Evam Shikshan Samiti to register. Limited seats—early application recommended.

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## Contact

Email: [atulitbiswas007@gmail.com](mailto:atulitbiswas007@gmail.com) • Phone: +91-7999051844 • Website: <https://atulitbiswas.com>

We focus on building skilled, safety-conscious technicians ready to support hospital infrastructure and patient safety.

## Prepare

Bring safety boots, basic hand tools, and a notebook. Prior vocational certification preferred.

