



# Blueprint for Partnership

The IPA-IAPMO Plumbing Education to Employment Program (Part - 4)



**Kathleen Mihelich**

Director of Career Services  
IAPMO



**Sherard Jones**

Workforce Preparation Specialist  
IAPMO

*This is Part Four in a series of articles about the procedural process being undertaken to produce effective plumbing training, education, and certification based on the Uniform Plumbing Code – India. The program will be implemented throughout India via a partnership between the IPA, IAPMO and the IIP (Indian Institute of Plumbing).*

## Curriculum Development

A curriculum can be simply defined as a collection of courses that is concentrated on a defined field of study. The primary focus of a curriculum is on what is to be taught and when, leaving to the teaching professionals decisions as to how the learning objectives and goals are achieved. Developing appropriate and relevant curriculum that will adequately represent a significant program such as the PEEP is a critical, essential step in the education process.

Having identified three specific target groups, three curriculums have been defined to meet the needs of the students and to achieve the goals of the program.

## Plumbing Systems Design Certificate Program

Plumbing systems are one of the most important and vital parts of an overall building design. Through this course of study, an individual will gain an understanding of the basic and advanced principles and code requirements of typical plumbing systems and the ability to design and review plumbing systems.

*Prerequisites:* Bachelor of Engineering degree or degree in progress  
*Minimum Required Instructional Materials:* 2008 Uniform Plumbing Code-India Code, 2008 Uniform Plumbing Code-India Illustrated Training Manual

### Semester 1

	Proposed Course Title
1	Plumbing Terminology I
2	Introduction to Codes and Standards
3	Plumbing Fixtures and Fixture Fittings
4	Water Heaters
5	Water Supply and Distributions
6	Drainage Systems
7	Sewer Systems
8	Indirect Wastes

### Semester 2

Proposed Course Title	
1	Plumbing Terminology II
2	Vents
3	Storm Drainage
4	Fuel piping
5	Health Care Facilities & Medical Gas and Vacuum Systems
6	Firestop Protection and Hydrant Systems
7	Graywater Systems
8	Backflow Prevention

### Plumbing Construction Management Certificate Program

Contractors, Construction managers, and Supervisors coordinate the work at construction sites from early start to final stop. Through this course of study, an individual will gain an understanding of the basic principles of managing code-compliant construction projects; and an understanding of the basic principles and code requirements of typical plumbing systems and the ability to install code-compliant plumbing systems.

*Prerequisites:* Five years minimum experience with basic education or diploma program in progress

*Minimum Required Instructional Materials:* 2008 Uniform Plumbing Code-India Code, 2008 Uniform Plumbing Code-India Illustrated Training Manual

### Semester 1

Proposed Course Title	
1	Plumbing Terminology
2	Introduction to Codes and Standards
3	Blueprint Reading
4	Plumbing Fixtures and Fixture Fittings
5	Water Heaters
6	Water Supply and Distributions
7	Sanitary Drainage
8	Indirect Wastes

### Semester 2

Proposed Course Title	
1	Traps and Interceptors
2	Vents
3	Storm Drainage
4	Fuel piping
5	Health Care Facilities & Medical Gas and Vacuum Systems
6	Firestop Protection and Hydrant Systems
7	Graywater Systems
8	Backflow Prevention

### Plumbing Technology Certificate Program

The Plumbing Technology program is a comprehensive two-tiered program designed to provide individuals with the skill to apply a broad range of plumbing principles. Through this

course of study, an individual will learn to install, repair, and maintain a variety of piping systems, plumbing fixtures, and other equipment generally associated with water distribution and wastewater disposal, and learn the basic principles and code requirements of typical plumbing systems. The program of study includes:

*Prerequisites:* Successful completion of secondary school study or a diploma program in progress

*Minimum Required Instructional Materials:* 2008 Uniform Plumbing Code-India, 2008 Uniform Plumbing Code-India Illustrated Training Manual

### Year One

#### Semester 1

Proposed Course Title	
1	Plumbing Terminology 1
2	Introduction to Codes and Standards
3	Blueprint Reading 1
4	Applied Math 1
5	Pipe Installations
6	Use and Care of Tools
7	Soldering and Brazing
8	IPA Apprenticeship

#### Semester 2

Proposed Course Title	
1	Applied Math 2
2	Water Supply and Distribution
3	Drainage Systems
4	Sewer Systems
5	Storm Drainage
6	Plumbing Fixtures and Fixture Fittings
7	IPA Apprenticeship

### Year Two

#### Semester 1

Proposed Course Title	
1	Plumbing Terminology 2
2	Indirect Wastes
3	Vents
4	Traps, and Interceptors
5	Fuel piping
6	IPA Apprenticeship

#### Semester 2

Proposed Course Title	
1	Health Care Facilities & Medical Gas and Vacuum Systems
2	Firestop Protection and Hydrant Systems
3	Graywater Systems
4	Backflow Prevention
5	IPA Apprenticeship