

IRF Road Construction & Maintenance Training program

Introduction:

As a country develops and treads in the globalization era, it demands the use of more sophisticated technology to assist in its development process, particularly in the area of engineering. This course is designed for people currently employed in the civil construction industry in the area of road construction and maintenance. The candidates will learn how to operate a range of plant and gain the knowledge and supervisory skills to carry out road construction and maintenance activities efficiently. The course aims to provide the participants with the understanding and knowledge in the application of new technology in the road construction and maintenance industry. This program is suitable for road construction and maintenance personnel who perform road construction work such as apply bitumen seal, place kerb/channel/median/barrier strips, apply road markings and signage, and maintain sealed roads and other work associated with road construction and maintenance. This course conforms to the International Road Federation (IRF) standards.

Who Should Attend?

Construction Engineers, Senior Construction Engineers, Construction Supervisors, Construction General Supervisors, Construction Project Managers, Engineering Technologists, Supervision Engineer, Inspection Engineers, Civil Inspectors.

Course Objectives:

By the end of this course delegates will be able to:

- Supervise road construction works in accordance with working drawings and specifications.
- Carry out and supervise road maintenance works
- Manage various quality control tests required for construction works
- Follow IRF health and safety policies and procedures
- Conduct effective workplace communication
- Plan and organize work
- Carry out measurements and calculations
- Manage construction materials and safely dispose of non-toxic materials
- Read and interpret plans and specifications
- Identify, locate and protect underground services
- Implement traffic management plan
- Obtain new knowledge on related technology in road construction and maintenance
- Understand the behavior of binders, aggregates and asphalt
- Understand asphalt mix design, and testing

- Understand the construction of roadways
- Understand pavement damage mechanisms, what they looks like, and how they are quantified
- Be able to suggest remedial repairs to pavements
- Understand pavement management systems
- Understand contracts and bidding
- Understand winter maintenance requirements for highways

Course Outline:

- Introduction to road building and construction
- Road building fundamentals
- Construction regulations
- Planning & contract management
- Plan and organize work
- Earthworks and slopes
- Culvert and drainage
- Drain and dewater civil construction site
- Carry out measurements and calculations
- Identify, locate and protect underground services
- Read and interpret plans and specifications
- Carry out manual excavation
- Support plant operations
- Spread and compact materials manually
- Carry out basic leveling
- Repair potholes
- Surfacing of roads
- Operation of plant and equipment
- Road furnishing and ancillary works
- Roadside furniture
- Handle resources and infrastructure materials
- Pavement construction
- Conduct stabilizer operations
- Safely handle bituminous materials
- Maintain drainage systems
- Place and form concrete kerb, channel and fixtures
- Maintain sealed roads
- Conduct road construction paver screeding operations
- Conduct earthworks
- Conduct road pavement construction
- Quality control in road works
- Maintenance of slopes and drainage
- Health, safety and security on site
- Work safely and follow OHS policies and procedures
- Pavement maintenance
- New technology in pavement engineering
- Laboratory testing
- Finances and economics
- Communicate in the workplace
- Maintain site records