

# IMSA NEW Traffic Signal Technician Certification Course Descriptions

## Traffic Signal Technician, Lev. 1

Traffic Signal Level I Certification indicates that the holder is familiar with the concepts and terminology associated with signalized traffic control devices and systems. The content is designed for the entry-level technician that has had some prior training or experience in electrical technology. Worksite safety is a primary skill area, having been covered in Work Zone Traffic Control Safety and also in this coursework. Principals of operation and the primary electrical details of cabinet wiring and components have been introduced. Equipment, methods, and materials of signal system construction have been reviewed. The basics of traffic signal design, maintenance, and legal issues have been explained and discussed. This certification holder is prepared to make a contribution on any traffic signal crew, whether involved in construction, maintenance, or design preparation with proper supervision and guidance. This certification also provides the required background information that will allow the technician to learn the material taught in the four Level II certification courses.

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Prerequisites: IMSA Work Zone Traffic Control Safety Certification or approved equivalent

## Traffic Signal [Bench](#) Technician, Lev. 2

The Traffic Signal Level II Certification indicates the holder has a well-rounded background in traffic signal technology from coursework and experience. The Level II Bench certification indicates the technician has additional training on traffic signal control cabinet equipment. This training includes the programming, application, and maintenance of controllers, conflict monitors, vehicle and pedestrian detection systems, and the communication and power wiring of the cabinet. The technician is also trained in electronic circuit operation and fault diagnosis, and the use of test equipment for diagnosis and certification of control cabinet equipment. The certification holder is prepared to make a substantial contribution in the signal maintenance operation of either a private firm or a public agency by preparing signal cabinets for deployment and/or troubleshooting and repairing cabinet components that are brought in from the field.

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Prerequisites: IMSA Work Zone Traffic Control Safety Certification or approved equivalent

IMSA Level I Traffic Signal Technician Certification

Two (2) years experience in the Traffic Signal Field

## Traffic Signal [Construction](#) Technician, Lev. 2

The Traffic Signal Level II Certification indicates the holder has a well-rounded background in traffic signal technology from coursework and experience. The Level II Construction certification indicates the technician has additional training on traffic signal control system construction, safety, materials, methods, and equipment. Activities covered include: safe operation of construction

equipment (from concrete saws to cranes), planning activities, documentation, and installation of conduits, poles, mast arms, signal heads, cabinets, and inductive loops. Setup and testing of a new signal installation is also reviewed. The certification holder is prepared to make a substantial contribution in the traffic signal construction group of a private firm or a public agency where new or replacement traffic signal construction is the focus.

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Prerequisites: IMSA Work Zone Traffic Control Safety Certification or approved equivalent

IMSA Level I Traffic Signal Technician Certification

Two (2) years experience in the Traffic Signal Field

## Traffic Signal [Design/Engineering](#) Technician, Lev. 2

The Traffic Signal Level II Certification indicates the holder has a well-rounded background in traffic signal technology from coursework and experience. The Level II Engineering certification indicates the technician has additional training on traffic signal control system planning, design, theory of operation, and legal/regulatory issues. Areas of training include industry standards, liability and regulatory considerations, traffic data collection, site inspections (prior to signal design), detection design, intersection phasing and timing plans, volume density and coordination timing, equipment selection, and project management. The certification holder is prepared to make a substantial contribution in the design of signalized intersections, whether employed by a private firm or a public agency, where new or replacement traffic signal planning and design is the focus.

Study Guide: 251 pages Copyright 2008

Prerequisites: IMSA Work Zone Traffic Control Safety Certification or approved equivalent

IMSA Level I Traffic Signal Technician Certification

Two (2) years experience in the Traffic Signal Field

## Traffic Signal [Field](#) Technician, Lev. 2

The Traffic Signal Level II Certification indicates the holder has a well-rounded background in traffic signal technology from coursework and experience. The Level II Field certification indicates the technician has additional training on traffic signal control system troubleshooting, on-site repairs, and maintenance methods and equipment. Areas of training include worksite safety, maintenance of traffic, traffic signal system equipment standards and operation, installation inspection, troubleshooting, equipment repair, replacement and programming, test equipment, signal phasing and timing, detection, system communications, preventive maintenance, and documentation. The certification holder is prepared to make a substantial contribution in the maintenance and repair of signalized intersections, whether employed by a private firm or a public agency.

Study Guide: 266 pages Copyright 2008

Prerequisites: IMSA Work Zone Traffic Control Safety Certification or approved equivalent

IMSA Level I Traffic Signal Technician Certification

Two (2) years experience in the Traffic Signal Field