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Dedicated to providing quality certification programs for the safe installation, operation and maintenance of public safety systems; delivering value for members by providing the latest information and education in the industry.

Personal & TARP Accreditation for I.M.S.A Recertification

Carrier & Gable 2016 Seminar Lineup

Programs offered by Carrier & Gable can assist the individual in the recertification process. Most seminars are eligible for Personal *or* Total Advancement Recognition Points (TARP). Active membership in IMSA provides TARP accreditation. As an active member you should be receiving the award winning IMSA Journal. Non-members holding IMSA certifications can receive Personal Recognition points towards their recertification goal.

IMSA certifications are good for three years. Points earned for each program offered must be logged/dated by the individual and *signed by the instructor*. The individual must then submit that log directly to the International office for accreditation. This log is available on the Michigan Section website, www.ImsaMichigan.org.

Class Descriptions

Attenuator Design Seminar

This one-day course is for maintaining agency and contractor employees involved in the installation and maintenance of attenuators. Short videos, real world scenarios, and a demonstration unit are the tools provided for this instruction. The class portion will take place in the morning, lunch will be provided and the hands-on presentation will take place in the afternoon. Please dress comfortably.

Prerequisite: None

26 I.M.S.A. TARP or personal points applies to Traffic Signals, MTR and S&M

Attenuator Maintenance Seminar

This one-day course is for maintaining agency and contractor employees involved in the installation and maintenance of attenuators. Short videos, real world scenarios, a demonstration unit and truck mounted attenuator are the tools provided for this instruction. The class portion will take place in the morning, lunch will be provided and the hands-on presentation will take place in the afternoon. Please dress comfortably.

Prerequisite: None

26 I.M.S.A. TARP or personal points applies to Traffic Signals, MTR and S&M

Introduction to Traffic Applications

This seminar is an introduction to various components that make up a traffic control system. The latest technologies in traffic signals, traffic controllers, detection systems, signs and systems will be introduced. This seminar is designed for traffic engineers, consultants and personnel involved in the applications and operations of traffic components.

Prerequisite: None

26 I.M.S.A TARP points applies to Traffic Signals

Networking and IP Communications

With advances in technology, Ethernet has become the protocol of choice for traffic control, video surveillance and other ITS applications. This one day seminar will explain how to take advantage of this technology that is now commonly integrated in to traffic controllers, cameras, and detection systems. This seminar is intended for those with little to no knowledge of Ethernet technology and will include discussions on protocols, switches, routers, and convertors. This is a lecture course, although **students are encouraged to bring their laptop computers.**

Prerequisite: None.

26 I.M.S.A. TARP or personal points applies to Traffic Signals

Broadband Radio

This one-day course will study the design, deployment and maintenance of wireless broadband communications systems. Basic concepts of wireless networking and Local Area Networking (LAN) technologies are covered. Emphasis will be placed on the use of wireless networks as backhaul for traffic controller communications. **Students are encouraged to bring their laptop computers.**

Prerequisite: Networking & IP Communicatians

26 I.M.S.A. TARP points applies to Traffic Signals

Conflict Monitor Seminar

This one-day seminar will familiarize the student with the functions and operation of the signal monitor found in all modern signal control cabinets. For those trouble-shooting or concerned about the safe operation of the signalized intersection, there is not a more important device to have an understanding of than the monitor. Standard NEMA features will be presented along with the enhanced functions of the monitors. A comparison and explanation of the various monitors including the TS2 MMU will be discussed. This is a combination lecture and hands-on workshop.

Students are encouraged to bring their laptop computer.

Prerequisite: None

26 I.M.S.A. TARP or personal points applies to Traffic Signals

Introductory Controller Class

This course is designed for individuals with little to no experience in the field, or “part-time” signal employees that would like a refresher on the basic concepts. A one-day class, it is intended to familiarize the student with an overview of the various components that make up a typical modern traffic controller assembly and includes a review of terminology used in the traffic signal field. Topics include: nomenclature, flashers, flash relays, load switches, bus relays, controller units, terminal facility block diagrams, and conflict monitors. This is a lecture course.

Prerequisite: None

26 I.M.S.A. TARP or personal points applies to Traffic Signals

EPAC Actuated Controller, Basic

This course is designed for individuals with little to no experience in the field, or those “part-time” signal employees that would like a refresher on the basic concepts of a typical EPAC controller assembly. A three-day course, it is intended to familiarize the student with controller unit data entries and cabinet wiring necessary for a simple 2 phase signalized intersection. Topics include: Utility data, phase data, unit data, coord. data, time base data, terminal facility drawings and wiring, controller assembly set-up, and test point identification. This is a combination lecture and hands-on workshop.

Prerequisite: Introductory Controller Class

78 I.M.S.A. TARP points applies to Traffic Signals

EPAC Actuated Controller, Advanced

This course is designed for individuals who have an understanding of the basic operation of this controller and are interested in some of the more advanced features available in EPAC and on the updated features and capabilities. A three-day course, it is intended to familiarize the student with some of the more complex controller unit data entries necessary in many of today's more sophisticated signalized intersections. Topics include: coordination and time base data entries, preemption data, special and phase function mapping features, multi ring configurations and systems data. This is a combination lecture and hands-on workshop.

Prerequisite: EPAC Basic or equivalent field experience

78 I.M.S.A. TARP or personal points applies to Traffic Signals

MARC NX / TACTICS Software Seminar

This one-day seminar will cover the features of the MARC NX/TACTICS software. Set up and installation of the software onto computers will be followed by demonstration of the capabilities and functions of the software. **It is recommended that students bring their laptops to class to participate in the programming functions.**

Prerequisite: EPAC Basic

26 I.M.S.A. TARP or personal points applies to Traffic Signals

MARC Closed Loop System Seminar

This two-day course will familiarize the student with both the MARC on-street master controller and MARC NX/TACTICS software that is used to interface with the local controller units and MARC masters. MARC master topics to be discussed and demonstrated will be systems communications, interface inputs and outputs, and system controls modes (manual, remote, time base, and traffic responsive). MARC NX/TACTICS software topics to be discussed and demonstrated include software installation and maintenance, data base creation and management, graphics, and communications. This is a combination lecture and hands-on workshop. **Students are encouraged to bring their laptop computers.** Class size is limited to 20.

Prerequisite: EPAC Basic Seminar or equivalent field experience in MARC system operation

52 I.M.S.A. TARP or personal points applies to Traffic Signals

Radio Communications Seminar

This one-day course will familiarize the student with license-free spread spectrum radio technology as utilized for traffic control and incident management. Students will learn the interfacing capabilities with controllers through RS232 and FSK. Additionally, remote contact closure applications will be analyzed along with area video wireless system integration. This is a combination lecture and hands-on workshop. **Students are encouraged to bring their laptop computers.** Class size is limited to 20.

Prerequisite: EPAC Basic

26 I.M.S.A. TARP points applies to Traffic Signals

Video Detection Seminar, Basic

This one-day course covers the basic design and application of video detection systems. Included will be camera installation and setup, utilization of processor and extension cards, and menu overview and creation of detection zones. A representative from the video detection manufacturer, Iteris, will conduct this seminar. This is a combination lecture and hands-on workshop. Class size is limited to 18.

Prerequisite: None

26 I.M.S.A. TARP or personal points applies to Traffic Signals

Video Detection Seminar, Advanced

This one-day course covers the more advanced features of the video detection system. Included will be the TS2-IM module to interface the system to TS2 controllers, the Access Module that provides a single connection point to system components, VRAS software that allows remote setup of the system, and the Edge Connect Module that provides 4 channels of streaming video and configuration remotely via a network. Exhaustive trouble shooting techniques will aid the user in evaluating video detection problems. A representative from the video detection manufacturer, Iteris, will conduct this seminar. This is a combination lecture and hands-on workshop. Class size is limited to 18.

Prerequisite: None

26 I.M.S.A. TARP points applies to Traffic Signals

Wireless Detection Workshop

This one-day seminar will introduce the student to the various components that are required for a complete wireless traffic detection system. The training will include the functions and operation of the vehicle sensors, access point and repeater modules. Students will be shown how to program the wireless detection system to optimize traffic detection.

It is recommended that students bring their laptops to class. This is a lecture and hands-on workshop. The class will be taught by a manufacturer's representative from the Sensys Corporation.

Prerequisite: Agency staff currently maintaining and installing Sensys systems

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