

JUNE 2014

## NJATC Event at Eaton's Crouse-Hinds

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### Hazardous Locations Concepts and Requirements

#### Crouse-Hinds by **FAT-N**

***The curriculum is changing!*** That typically gets your attention – and we hope that it did – and that you will keep reading. As a follow-up to our recent

“Save the Date” announcement, the NJATC would like to provide you specifics and cordially invite you and anyone in your organization with an interest in Hazardous Location concepts and requirements to an exciting seminar to be conducted in partnership with, and hosted by, Eaton’s Crouse-Hinds Business. This event will feature a unique and informative 1.5 days of hazardous location education and training at Eaton’s facility in Houston, TX. This seminar is a must for all Instructors that are teaching Hazardous Locations curriculum at their JATC along with contractors, electrical workers, inspectors, Code instructors, or anyone else with an IBEW-NECA affiliation that has an interest in hazardous locations installations, concepts, products and requirements. The 1-1/2 day seminar will be co-taught by John Simmons, Florida East Coast JATC’s Training Director and a member of NEC Code Panel 14 and John Weidig, Eaton Crouse-Hinds’ Regional Field Application Specialist.

This event will officially introduce the NJATC’s curriculum change featuring a move back to the “*Crouse-Hinds Digest*” and the NJATC’s new Instructor and Student content into the curriculum. In addition to being useful and informative to anyone in electrical industry, instructors teaching this curriculum at their JATC will not want to miss this “how to teach” event as they will be among the first to be introduced to the creation of the new Lessons, Learning Objectives and Information Sheets developed around the Eaton Crouse-Hinds 2014 *Code Digest*. Participants will become familiar with the content of the 6 Chapters of the 2014 *Code Digest*, the 9 Lessons of related NJATC curriculum, hazardous locations product solutions, and a number of related UL White book provisions, both in the classroom setting and in a full scale mock refinery and utility power distribution vignette.

Mr. Weidig will demonstrate a number of hazardous locations products and share his vast hazardous locations product



JULY 26 - AUGUST 1, 2014  
ANN ARBOR, MI

National Joint Apprenticeship and Training Committee for the Electrical Industry



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knowledge gained through his years of conducting training and working with engineers, contractors and electrical workers to better understand and apply safe and practical solutions to their hazardous locations installations. John Simmons brings unique perspective and knowledge to the seminar gained through his long-standing service on the NEC Code Panel dealing with hazardous locations (Panel 14), his years applying and enforcing the NEC as an electrical inspector, and his past and present work developing and presenting the NJATC's hazardous locations curriculum. Mr. Simmons will follow a course outline that includes the 9 Lessons of the NJATC curriculum covering the following topics:

**Lesson 1** - Hazardous (Classified) Locations Concepts

**Lesson 2** - General Rules for Hazardous (Classified) Locations – Article 500

**Lesson 3** - Class I Locations – Article 501

**Lesson 4** - Class II Locations – Article 502

**Lesson 5** - Class III Locations – Article 503 and Intrinsically Safe Systems – Article 504

**Lesson 6** - Class I – Zone 0, 1 and 2 Locations – Article 505

**Lesson 7** - Zone 20, 21 and 22 Locations – Article 506

**Lesson 8** - Specific Locations Articles 511 through and including 516

**Lesson 9** - Hazardous Location Applications

The *Code Digest* has long been recognized as an excellent resource for the industry. The foreword in its Introduction tells us that “Eaton’s Crouse-Hinds has revised its Code Digest for 2014 to meet the needs of design personnel for a ready reference to equipment and installation ideas in hazardous locations. Selected Articles from the National Electrical Code® have been explained with diagrams and photographs of electrical hardware taken from our Eaton’s Crouse-Hinds Product Catalog.” The NJATC is pleased to again partner with Eaton’s Crouse-Hinds Business and incorporate the *Digest* as a resource in our curriculum and introduce these new training materials via this seminar.

Note that the event is scheduled to conclude at noon on Tuesday, June 24, 2014 so that participants can travel back home the same day upon conclusion of the event. Please contact Ruth Peacock at the NJATC with any questions on registration via email at [ruthp@njatc.org](mailto:ruthp@njatc.org) or by phone at 301.715.2320. Seats will be limited, so send in registration forms as quickly as possible using the information on the next page.

Link to Registration Form: [http://www.njatc.org/downloads/Class\\_Registration\\_Form.pdf](http://www.njatc.org/downloads/Class_Registration_Form.pdf)

**Course Name:** Hazardous Locations Concepts and Requirements Seminar  
(enter “Hazardous Locations Seminar” on the Registration Form)

**Cost:** \$45.00 per participant

**Course Number:** X192                      **Session Number:** 14-001

**Dates and Times:** Monday, June 23, 2014 – 8:00 a.m. - 4:30 p.m. *and*  
Tuesday, June 24, 2014 – 8:00 a.m. - Noon

**Training Location:**

Eaton Technology Center  
3413 N. Sam Houston Pkwy West  
Suite 212A  
Houston, TX 77086

**Hotel Information:**

Hilton Houston North  
12400 Greenspoint Dr.  
Houston, TX 77060  
281.875.2222

**Closest Airports:**

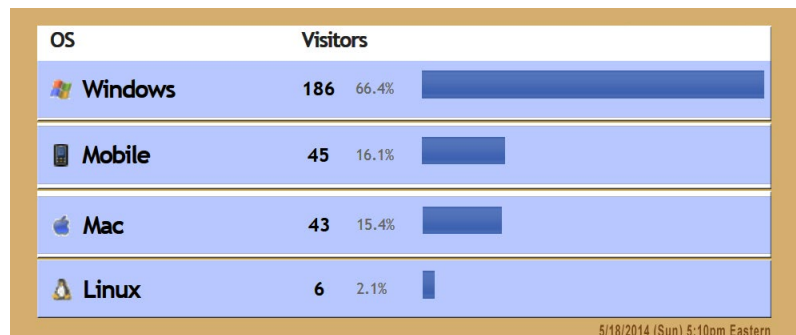
**Houston Intercontinental Airport  
(IAH)**  
*Distance from Hotel: 7 mi.*  
**William P. Hobby Airport (HOU)**  
*Distance from Hotel: 35 mi.*

# Will the LMS Run on a MAC? YES & NO...YES

By far, computers running the *Windows Operation System* (OS) make up the majority of laptops and Desktops for personal use. The *Apple Mac computer/OS* is the other major constituent in the personal computer industry. Actually the ratio of Windows running computers and Mac differ depending on the demographics. For example:

- *The business world* has a much higher ratio of Windows based computers running programs such as Microsoft Office and accounting software
- *The graphic & marketing industry* has a much higher ratio of Mac computers running Adobe Illustrator, etc.
- *The home consumer and gaming enthusiasts* in the past leaned toward a Windows running computer
- *The Video and Music industry* primarily use Mac Computers
- *2:1 College students* use Windows running computers, but in recent years the Mac is certainly becoming more popular

**OPERATING SYSTEMS:** It is really hard to accurately list the ratio of Mac verses Windows running computers, especially with the growing popularity of mobile devices such as tablets and intelligent phones. You can spend all night looking through internet articles and still not have a real good feel of the breakdown between Mac and Windows users. So what really matters is what the JATC apprentices are using. Keep in mind at the time of this bulletin there are 20 BETA JATCs that are testing the Inside Apprenticeship courses of the LMS. The NJATC utilizes server software that tracks the various parameters of the BETA users of the LMS. No matter what the usage of Mac and Windows users are listed in the previous paragraph, the JATC BETA training centers report that there is a small population of Mac users among the apprentices...which is not surprising because of the Mac popularity among the younger generation. The chart denotes the breakdown of OS used by the BETA JATC Apprentices on a Sunday afternoon. Notice that Mobile OS is listed too; this is the use of tablets and new offerings of computers packaged as a tablet.



**REQUIREMENTS FOR THE LMS:** The mention of tablets in the previous paragraph brings up the question of what does the LMS require to experience everything within?

- Windows 7 or 8 OS (full version, not RT)
- FLASH plugin for the browser
- An occasional browser plugin running under a Windows Computer

So why does the OS chart list mobile devices, since many of them are not running Windows. When it comes down to the root of the system, many elements of the LMS require Adobe FLASH...therefore if a browser can run FLASH, these elements will run. BUT, there are a few

**Adobe Flash** is a software platform used for creating vector graphics, animation, games and rich Internet applications that can be viewed, played and executed in webpages within Adobe Flash Player.

--Wikipedia

simulator components/elements of the LMS that require Windows, so these particular elements simply will not run within the LMS if the computer is not running Windows.

**FLASH vs. HTML5:** FLASH is most certainly the most used software development tool for animation in websites. It has been around for over 20 years, and has been improved greatly over the years. But competition between Apple and Adobe resulted in the design of Apple mobile devices not running FLASH through the means of a browser. Then, within the past few years, HTML5 came along which is friendly to both laptop/desktop computers and most mobile devices. The downside is it is not quite the animation tool that FLASH has evolved into over the past decade. As it evolves into a much more powerful means of animation development, and the software designers become better acquainted, someday it will be prominent in the Web world and the NJATC LMS. But again, these all depend on where the mobile industry migrates...it really feels like a moving target many times.

**MOBILE HARDWARE:** Since the launch of the iPad several years back, the mobile market has really shaken the personal computer industry; which adds complexity to the LMS. Most LMS programs, including the NJATC's, is browser driven because of the higher complexity of simulators, etc. However, when the

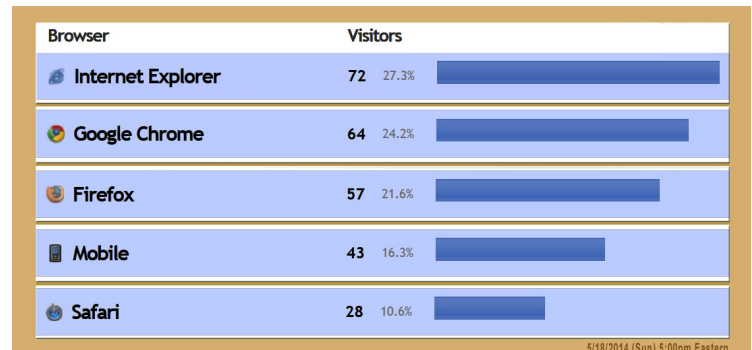
smart phones came along, the world of mobile apps (Applications) came with it. First they were simple little apps that fetched the weather, or chased angry birds around. Now, they are much more powerful especially in the Apple iPad and Google Android tablet devices (e.g. Galaxy). Herein lies the issue -- software developers cannot design a complex program that runs under Windows or Mac in a browser and simply convert it to an app...it sometimes requires coding the software from the ground up. This chart shows the breakdown of mobile devices that are being used by the JATC BETA apprentices.



- Google/Android mobile devices utilize apps from the Google Play Store
- Apple mobile devices utilize apps from the Apple App Store
- Windows mobile devices utilize apps from the Microsoft App Store

It is because of this reason there is often a difference between a software program that runs on a full version of a Windows Computer or a Mac and what runs on the three mobile devices listed above. Most of the time the complex programs are not quite the powerhouse on the mobile device as they are on the computer.

**BROWSERS:** So, the LMS is a complex operation that houses various learning components that do not easily translate to mobile apps. When it comes to running the LMS, there are four main browsers that can be utilized on a computer running Windows. Browsers can be challenging too because they are constantly upgrading and improving. What this means to software engineers is that every time a browser is upgraded, there may be something different in the software code that muddies the waters in the software, such as an LMS. Therefore, since browsers are free, it is probably in the best interest of the apprentice to have a couple of different browsers loaded on the computer if any issues arise. Please note, our LMS



programmers try their best to predict issues with browser updates, but again it is often a moving target. The chart at the bottom of the previous page denotes the browsers used by the BETA apprentices.

- Internet Explorer (Windows)
- Google Chrome (Windows)
- Mozilla Firefox (Windows)
- Mobile Browsers (iPad, iPhones, Android, Windows for mobiles, etc.)
- Apple Safari (Mac & Windows)

### Enough about all the issues with Flash/HTML5, Mac/Windows, Browsers/Apps, etc....how can you run the full NJATC LMS on a Mac?

Now that you understand that the LMS requires a computer running Windows because of FLASH and browser plugins that require Windows, a Mac computer will sort of run the LMS. Unlike the Apple iPad, the Mac computer WILL run FLASH, so most of the components in the LMS will run on the Mac. What will not run is a few simulators that require the Windows OS...such as the Transformer Simulators and the new Electronic Theory Simulator (ETS). Future labs may also require these simulators too.

Mac computers can run a full version of Windows in addition to the Mac OS. When a full version of Windows is running on a Mac, then all of the components of the LMS will work...100%. There are two ways to run Windows on a Mac. Both require that you purchase a copy of Windows 8.1.

**BOOT CAMP:** Boot Camp comes on the Mac computer as one of the stock software items. It allows the user to load Windows on the Mac. But the downside is that the Mac can only be booted in either the Mac OS or the Windows OS...not both. Boot Camp allows the user to keep the Mac and Windows files separate...it looks like two separate hard drives. Go to this link to learn more: <http://support.apple.com/kb/ht1461>

**VIRTUAL MACHINE SOFTWARE:** There are two common software programs available for the Mac that allow the user to load Windows on the computer as a virtual machine. These programs allow the Mac and Windows Operating Systems to run at the same time. The user can go back and forth between the two operating systems with ease...even share files between the two. These software programs can be downloaded from the internet. Keep in mind, this still requires a purchased copy of Windows 8.1. These programs also work with Win7, if you can get your hands on a copy.

- **Parallels** (\$79.99)  
(Go to this link to learn more: <http://www.parallels.com/products/desktop>)
- **Fusion by VmWare** (\$59.99)  
(Go to this link to learn more: <http://www.vmware.com/products/fusion/>)



To purchase Windows 8.1, go to the Microsoft Store. The cost is \$119.99 and works as a fresh install or upgrade from Win7. You will also create an account to maintain all your records of purchase.

[http://www.microsoftstore.com/store/msusa/en\\_US/pdp/Windows-8.1/productID.288401200](http://www.microsoftstore.com/store/msusa/en_US/pdp/Windows-8.1/productID.288401200)

# 2014 NJATC CALENDAR OF EVENTS

## REMINDERS:

- Register for 25<sup>th</sup> Annual NTI – Ann Arbor, MI



### Have you:

- o Registered your Office Manager for the Office Managers Group & Seminar to be held at NTI?
- o Registered for the Eaton's Crouse-Hinds Hazardous Locations Concepts and Requirements Seminar?



**Don't Miss Out!!**

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## JUNE

- 23-24 Hazardous Locations Concepts and Requirements Seminar (Crouse-Hinds by Eaton) – Houston, TX
- 23-27 Cable Splicing Module I – Medway, OH



*Summer Vacation*

## JULY

- 14-18 Cable Splicing Module II – Medway, OH
- 26-8/1 National Training Institute – Ann Arbor, MI

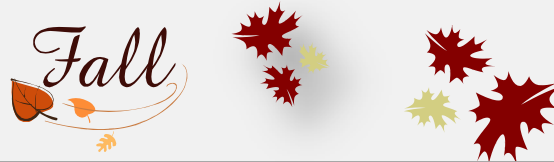


## SEPTEMBER

- 3-4 NJATC & Buckingham Partnership in Training – Newnan, GA
- 8-12 Cable Splicing Module II - San Bernardino, CA
- 10-12 2014 Significant Changes to the NEC® – Columbus, OH
- 16-17 Test Administrator Training – York, PA
- 18-19 Craft Certification Performance Evaluation Training – York, PA
- 22-26 Cable Splicing Module VI – Wind Farm – Medway, OH

## OCTOBER

- 15-17 10<sup>th</sup> Annual Training Partner Summit – Colorado Springs, CO
- 20-24 Cable Splicing Module VI – Wind Farm – San Bernardino, CA
- 21-22 Test Administrator Training – San Bernardino, CA
- 23-24 Craft Certification Performance Evaluation Training – San Bernardino, CA



## AUGUST

- 1 Last day of National Training Institute – Ann Arbor, MI
- 12-15 Cable Splicing Module IV – San Bernardino, CA
- 18-22 Cable Splicing Module IV – Medway, OH
- 21-22 Craft Certification Performance Evaluation Training – Renton, WA
- 25-29 Cable Splicing Module III – Medway, OH

## NOVEMBER

- 4-5 3M's Medium Voltage Termination and Splicing Seminar – Austin, TX
- 17-18 Craft Certification Performance Evaluation – Jacksonville, FL
- 19-21 NJATC Regional Seminar – Las Vegas, NV



For more information about the above courses and to register, please visit:  
<http://www.njatc.org/training/courses.aspx>