Now Arriving on Track 1...NMRA *EduTRAIN®*

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You’ve heard about “*EduTRAIN®*”, but what is it?

NMRA *EduTRAIN®* is several things.

1. It is a program intended to help the NMRA better fulfill its charter objective of providing education and training for model railroaders.
2. It is intended to provide another reason for model railroaders of all skill levels to join the NMRA and consider participating in the AP program.
3. It will become the first complete curriculum of re-usable turnkey clinics covering all aspects of model railroading from kit building to scenery, electricity and electronics, layout construction, scenery, and operation. NMRA *EduTRAIN®* clinics will include traditional presentations as well as demo labs and hands on (Make and Take) workshops where the primary objective is to teach. When fully implemented, NMRA *EduTRAIN®* will allow a model railroader to progress through all phases of model railroading, according to their interests, from novice to Master Model Railroader.
4. It is based on a methodology for developing courses (clinics) based on many years of experience in government, industry, the military and education that is proven to facilitate the transfer of
knowledge and skills. This methodology will provide higher quality and greater consistency for all clinics included in the NMRA EduTRAIN® brand.

5. It will include clinics to train model railroaders to become more comfortable and proficient at delivering presentations (Train the Trainers).

6. NMRA EduTRAIN® is being offered by the NMRA as a recommended practice, not a mandatory requirement. Once approved, clinics will be available through the NMRA to regions and divisions for presentation at official NMRA events. NMRA EduTRAIN® does not include or replace other informational clinics such as layout tours, travelogues, or general information on railroad practices at NMRA events. If you have a favorite clinic, NMRA EduTRAIN® does not render it obsolete. But if you have a clinic that does a particularly good job of teaching other modelers how to do something related to model railroading, AND you are willing to consider some rework to fit the NMRA EduTRAIN® model, we would like to talk to you.

NMRA EduTRAIN® evolved from the Michiana Division School of Model Railroading where it has been used successfully at the Division level. It was proposed to the national organization, accepted, and is continuing to evolve into a rich curriculum of clinics.

Let’s look at these elements in a little more detail.

**Provide Education and Training**

One of the charter objectives of the NMRA was to help members learn about model railroading and improve their skills to become better model railroaders. Historically, this has been accomplished through clinics at various NMRA events at the Divisional, Regional and National levels. These clinics have included presentations about various facets of model and prototype railroading and demos or hands on workshops. However these clinics have tended to reflect the interests and talents of presenters who were available for each individual event and did not necessarily cover the broad range of modeling topics listed above. Regional and National conventions tended to draw from a larger audience and could attract more presenters including many well known modelers. Divisional events usually drew presenters from a more limited area. But nowhere in the NMRA history has there been an effort to develop and capture a complete curriculum of clinics covering all aspects of model
railroading with consistent high quality in a way that they could be reused. This is, and will be, an ambitious objective.

Establishing a broader curriculum of clinics, covering more aspects of the hobby and ensuring a consistent level of quality, allows more clinics to be more easily and widely available to NMRA events at all levels. NMRA EduTRAIN® is the first effort by the NMRA to provide a more complete and more consistent level of quality for use at any NMRA event. NMRA EduTRAIN® will also make it possible for any Divisional or Regional convention to draw from a central repository of presentations created by knowledgeable members and presented locally.

Incentive to join NMRA
A complete curriculum of consistent high quality clinics is one more real reason for model railroaders to join the organization. Model railroading, as we all know, is a hobby with many different facets. Many new or casual model railroaders simply are not familiar with prototype practices or do not possess basic model railroading skills. Modelers interested in modeling earlier times may not have ready access to accurate information or may not know how to find it, and because of increased security, learning about current railroad activity is not nearly as easy as it used to be. By providing a program that allows those interested in the hobby to become more knowledgeable and proficient by working with, and learning from experts, the NMRA can offer a distinct reason to join the organization.

Curriculum
The complete curriculum will include the following major areas and each area will include clinics from introductory through intermediate to advanced.

- Introduction to Model Railroading (Model Railroading 101)
- Model Building
  - “Shake the box” to Advanced kits, Kitbashing and Scratchbuilding
  - Rolling Stock and Structures
- Using Useful Tools Safely
- Layout Planning and Construction
  - Develop a concept, design the layout, construct the room and consider aesthetics
  - Modular Layouts (Freemo, Ntrak)
- Basic Electricity, Wiring and Soldering for Model Railroaders
- Track Laying – Best practices for keeping trains on the rails and realistic appearance
• Making it Realistic
  • Different Techniques for Scenery, Backdrops and Weathering
• Maintenance – Best practices to keep trains running well and improving RTR models
• Advanced Electronics
  • DCC, Decoders, Detection and Signaling, Useful Circuits and Electronics
• Operations
  • Car Movements, Train Movements, Signaling, Dispatching, JMRI
  • Operating methodologies: TT/TO, CTC, DTC, Track Warrants, etc.
• Prototype Operations
  • Modeling industries and customer operations realistically
• Research – Sources for Information including Internet, Historical Societies, NMRA library, etc.
• Photography – Prototype (safely and legally) and Model
• Training the Trainers

This is a preliminary curriculum and subject to change.

Methodology

NMRA EduTRAIN® incorporates Systematic Approach to Training (SAT), a teaching methodology that has been used successfully for many years by government, industry, the military and education to teach essential knowledge and skills. This methodology relies on sound teaching methods to ensure the successful transfer of information from teacher to student. Simply stated, the methodology starts with a task analysis: what are the tasks that a modeler needs to perform in order to accomplish an objective? These tasks could include, but are not limited to, building bench work, laying track, installing the electrical control system, adding scenery and buildings, creating backdrops, building and weathering rolling stock, and, finally, operating the layout. If necessary, tasks are subdivided until they can be identified as specific courses or clinics. The complete list of tasks from introductory to advanced becomes the curriculum and individual tasks become a single course or clinic. For each task, a specific set of skills and knowledge is identified; for example, what are the skills and knowledge needed to build a simple or intermediate kit. Based on this task list, learning objectives are written. For instance: Upon completion of this clinic, Using Decoder Pro, the trainee shall be able to program all of the sound functions of the onboard DCC/Sound decoder in their locomotive. This is called an enabling learning objective. There may be several enabling learning objectives for any given clinic. From this needs list, specific training objectives are identified. Prerequisite needs will be identified as enabling.
**Objectives.** If necessary, these enabling objectives can be incorporated into another course. From the needs list, a lesson plan is developed to present or teach the skill. From the lesson plan, a list of course materials is identified, and the course or clinic is developed. Clinics are intended for presentation to NMRA members and prospective members depending on the event. Following completion of the course, the current AP program already exists to provide evaluation of the student’s progress. Clinics will typically be less than one hour.

This sounds complicated, but successful presenters tend to use a similar approach and may not even realize they are working through such a structured process. In fact, the NMRA EduTRAIN® model has been used in a number of presentations at several regional conventions throughout 2013 by members who have been working to develop the program. These presentations have all been very well received by audiences.

**Quality and Consistency**
One of the major differences between the NMRA EduTRAIN® process and most prior clinics will be some formalization of the process into the finished product. This is necessary to ensure greater consistency between different clinics, a higher level of quality in the finished product, and portability of the clinic for reuse by other presenters. Part of the NMRA EduTRAIN® process will be a review and approval of all potential clinics to be included. This is analogous to the current AP process which relies on specific judging and approval criteria to ensure a consistent, high quality model.

**Training the Trainers**
Quality and consistency of course materials are only part of the need. It’s also necessary to provide for quality and consistency of the course presentation. So, NMRA EduTRAIN® will include a track for teaching presenters to become better and more comfortable at delivering the material.

As courses are developed and approved, they will be added to an online library where they will be available for download and reuse at any NMRA event. Guidelines are being developed with the AP program to provide AP credit to course authors and presenters and an FTP (File Transfer Protocol) capability is being added to the new NMRA website to allow clinics and clinic materials to be uploaded and downloaded.

**Example**
Let’s look at just one example to see how an NMRA EduTRAIN® clinic for Detailing Freight Cars would work. In this example, the clinic title is also the primary learning objective. Specific objectives within the course would include:

1. Identify the common details found on most freight cars.
2. Identify the common ways to attach detail securely so that it will withstand normal operations.
3. Identify railroad specific detail.
4. Demonstrate how to carve molded on detail from a model freight car.
5. Demonstrate how to drill holes for installing detail.
6. Demonstrate how to remove factory lettering without damaging the painted surface.
7. Demonstrate how to change out and upgrade couplers.
8. Verify coupler height and workability.
9. Demonstrate how to perform paint touchup.
10. Apply weathering.

The clinic would need to address all ten of these objectives. The course “package” would include a brief course description. For example, with the above objectives would be this course description:

**Detailing Model Freight Cars Clinic Description**

This clinic is for modelers who are already familiar with model freight car basics such as assembly of typical “shake-the-box” kits. They will learn how to take their model freight cars to the next level by learning the accompanying clinic objectives (above). Required tools and materials include:

1. Hobby knife w/#11 blade and a curved blade
2. Pin vise or Dremel-type drill
3. CA cement or equivalent
4. Assorted hobby screwdrivers
5. Decals or dry transfers
6. Paints
7. Paint brushes
8. Cotton swabs
9. Small diagonal cutters
10. Tweezers
11. Weathering chalks or paints

This example shows that NMRA *EduTRAIN®* is not substantially different than previous training clinics, but provides a more methodical way of delivering the content to ensure consistency and quality.

**So what is an NMRA *EduTRAIN®* clinic?**

In one word: FOCUS. While most current clinics are based on the presenter’s point of view, an NMRA *EduTRAIN®* clinic is focused on particular learning objectives that are, in turn, based on the Systematic Approach to Training Methodology described earlier.

Another very important difference between a typical clinic and an NMRA *EduTRAIN®* clinic is this; typical clinics are focused on the subject being presented. An NMRA *EduTRAIN®* clinic focuses on you, the modeler. NMRA *EduTRAIN®* clinics are “learner centered”. It’s all about you. As an example of
this difference, a clinic based on *How I Modeled Anycity, USA* would not be a good candidate, but one based on *How to Create a Layout Design Element based on Anycity, USA* would be a much better candidate. The difference is in the focus: the first clinic explains what the author did, but the second clinic specifically teaches you how to do it.

An NMRA *EduTRAIN®* clinic is specifically designed to teach knowledge or develop a skill. It is about teaching and learning, so it needs to be developed in accordance with the methodology described earlier. The clinic will include a statement of the learning objective(s) for the course, course description, author’s name, and an NMRA *EduTRAIN®* logo. Each slide will include speaker notes to assist other presenters. Presentations will use Microsoft PowerPoint because of its wide use and availability. However, authors should consider the program level and portability issues between Windows and Apple platforms. Experience shows that some features may not work equally on all platforms. Because many current presentations are far too large to distribute as email attachments, we have decided to use an FTP (File Transfer Protocol) capability to upload and download clinics. Clinic authors will retain ownership of, and all rights to their clinic, but will grant the NMRA a license to re-use the clinic at future events. Authors will ensure that they have rights to use all photos used in the clinic. Authors will be able to update or change the clinic and will be asked to correct any errors that are found in the material. Existing clinics may need some rework to conform to these criteria, but existing clinics will be welcomed as submissions (see sidebar). As mentioned earlier, NMRA *EduTRAIN®* clinic authors will be eligible for AP credit as will NMRA *EduTRAIN®* clinic presenters.

**Approval Process**

A committee of reviewers, or Board of Education, consisting of a small number of people is being formed to review and approve initial submissions. As more people gain experience with NMRA *EduTRAIN®*, this approval process will migrate to the Regional level, and the Board of Education will provide oversight to ensure ongoing quality and consistency. In this way, we expect the clinic approval process to
work similarly to the current AP process. Once a clinic has been approved, it will be uploaded to an FTP site on the new NMRA web site.

The NMRA EduTRAIN® Process

NMRA EduTRAIN® is not being developed in a vacuum. We recognize that there are already alternatives available from hobby publishers and online clinics. We intend to consider these alternatives as we move forward. However, we strongly believe that there is a large body of knowledge within the NMRA and talent to produce a rich curriculum of offerings to promote the organization and attract new members. Once again, NMRA EduTRAIN® is not intended to make existing clinics obsolete. It will take some time to establish a complete curriculum of approved NMRA EduTRAIN® clinics, so if you have a clinic that works well today, you should plan to continue using it. However, if you have a clinic that teaches specific knowledge or skills, and you are willing to consider some possible rework to meet the EduTRAIN standards, please consider submitting your material for consideration by following the instructions in the sidebar.

Plans are underway to provide more information about NMRA EduTRAIN® at the national and a number of Regional conventions in 2014. Watch for an NMRA EduTRAIN® clinic near you.