

STLE Learning Pathways Quick Guide



WHAT IS THE STLE LEARNING PATHWAYS?

STLE created the Learning Pathways as an online resource library for lubrication industry professionals to help align and target their education and career development needs. The pathways include STLE educational resources that have been peer-reviewed and organized by topic area and level of expertise, including **webinars, short courses, articles, in-person courses, and book chapters.**

Currently, the Learning Pathways have been developed for a Lubrication Specialist and Oil Analyst, but STLE has plans to update and improve these pathways with new reference materials as they become available, as well as future plans for other targeted career pathways.

The benefits of STLE's Learning Pathways

- **Global Knowledge**

Peer-reviewed content by industry experts.

- **Flexibility**

Learn at your pace, anywhere with a computer and access to the Internet.

- **Accessibility**

Online technical resources available 24/7.

- **Personalized Approach**

Choose from various content mediums for different learning styles that work for you.

- **Cost-Effective**

Included for free with a STLE membership.

LEARNING PROCESS

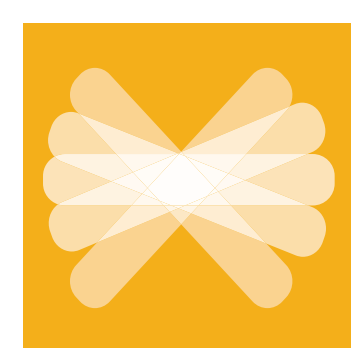
To use the Learning Pathways, STLE volunteers reviewed and organized all of the content material into two areas: Key Subject Areas and Knowledge Levels (“Basic”, “Intermediate” and “Advanced.”) While the content material was organized by volunteer expertise into an appropriate knowledge level, it should be noted that the learning and comprehension process is different for each individual when utilizing the pathways.

In simplistic terms, the knowledge levels can be defined as:



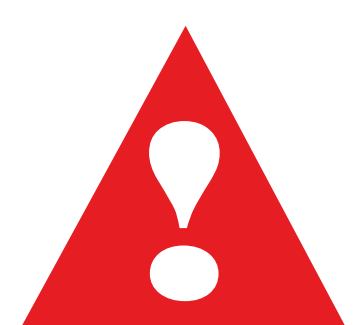
Basic

Information required to develop and understand the basic foundation of the key subject area.



Intermediate

Information that would typically be required to be relatively competent in that key subject area (i.e., provides a solid performance level as an onsite Lubrication Specialist or Oil Analyst in most industries; or the minimum level of knowledge that should be required to pass a certification exam.)



Advanced

Advanced knowledge beyond what would normally be required for a Lubrication Specialist or Oil Analyst (or a certification exam), but would be useful for job-specific requirements/duties.



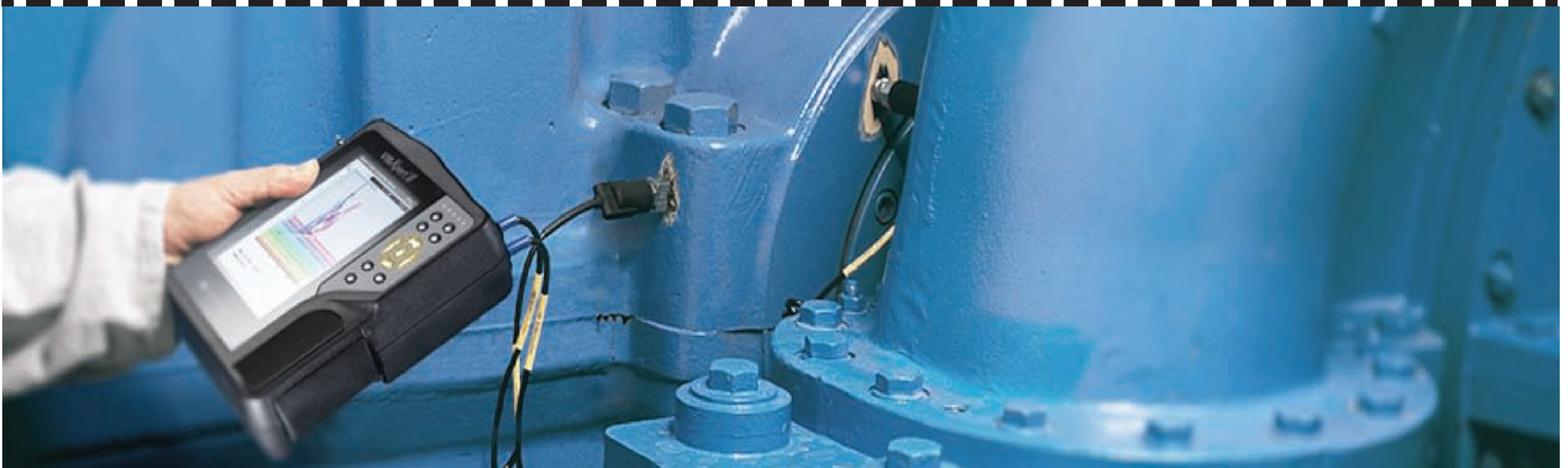
WHAT IS A LUBRICATION SPECIALIST?



A Lubrication Specialist is an individual who might be designated as a “Lubrication Engineer” by his/her employer. The job description for a Lubrication Specialist includes, but is not limited to, the following:

- Evaluates, selects and recommends the proper lubricants to use and changes.
- Assists in purchasing lubricants by identifying which companies and products can be used interchangeably in a cost-effective manner.
- Conducts lube surveys; specifies lubricants and procedures to those buying or installing new equipment.
- Trains lubricators and assembles work list for them to use. Establishes lube frequencies on all equipment. Designs or modifies all types of lubricant dispensing systems.
- Develops and implements quality assurance and used lubricant analysis programs.
- Oversees oily waste collection, reclamation or disposal. Converts as much usage as is economical to bulk.
- Consolidates lubricant inventories to the fewest possible products.
- Maintains records of lubricants by application throughout the plant.
- Troubleshoots and problem solves lubrication failures to identify root cause. Identifies corrective action to take and follows up.

WHAT IS AN OIL/CONDITION ANALYST?



An Oil/Condition Analyst is an individual who might be designated as a Reliability Engineer or Lab Analyst by his/her employer. The job description for a Oil/Condition Analyst includes, but is not limited to, the following:

- Reviews and interprets oil analysis results.
- Performs oil analysis testing.
- Develops and implements new and used oil analysis programs.
- Interprets OEM recommendations and selects lubricants for new equipment.
- Evaluates, selects and recommends the proper lubricants to use.
- Conducts lube surveys.
- Oversees oily waste collection, reclamation or disposal.
- Consolidates lubricant inventories to the fewest possible products.
- Maintains records of lubricants by application throughout the plant.

TLT ARTICLES

One of the primary resources for any lubrication industry professional is STLE's *Tribology & Lubrication Technology (TLT)* magazine.

Industry experts have reviewed and categorized over 400 TLT articles for inclusion on the Lubrication Specialist and Oil Analyst Learning Pathways. These articles are available on the Learning Pathways as downloadable PDFs.

The categorization of TLT articles by both key subject areas, and the expertise level of the material, makes this valuable content easy to use and accessible.



IN-PERSON COURSES

STLE's Foundations of Lubrication Engineering course is the first STLE education course built following the creation of The Learning Pathways.

The Foundation of Lubrication Engineering course was designed to cover the topics in the first priority group on the Lubrication Specialist Learning Pathways, at a basic level. The topics include:

- Base Oils
- Additives
- Friction & Tribology
- Hydraulics
- Grease
- Gears
- Bearings

The Foundations of Lubrication Engineering course gives attendees, especially individuals new to the industry, a strong background of information to build upon as they progress through further knowledge on the STLE Learning Pathways.

If you have any questions about the Foundations of Lubrication Engineering course, call STLE Headquarters at (847)825-5536, or email STLE's Education Manager, Tom Heidrich at theidrich@stle.org.



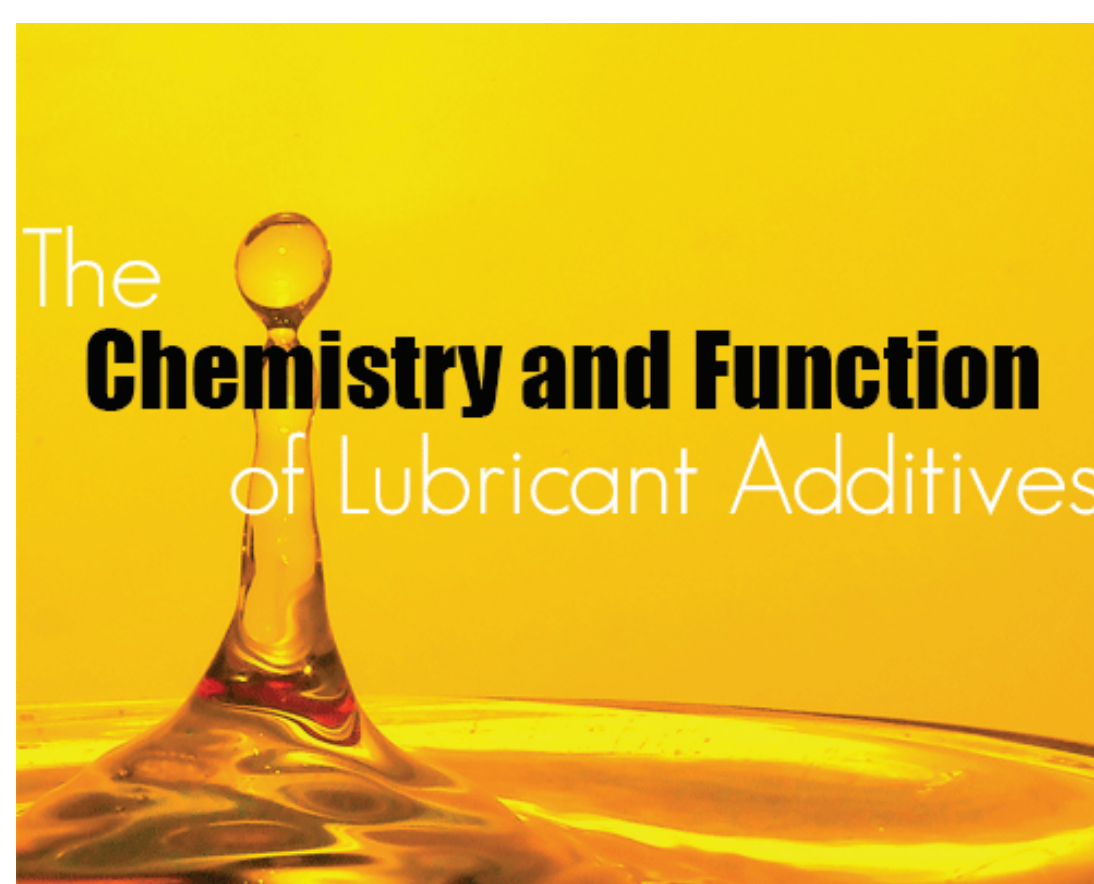
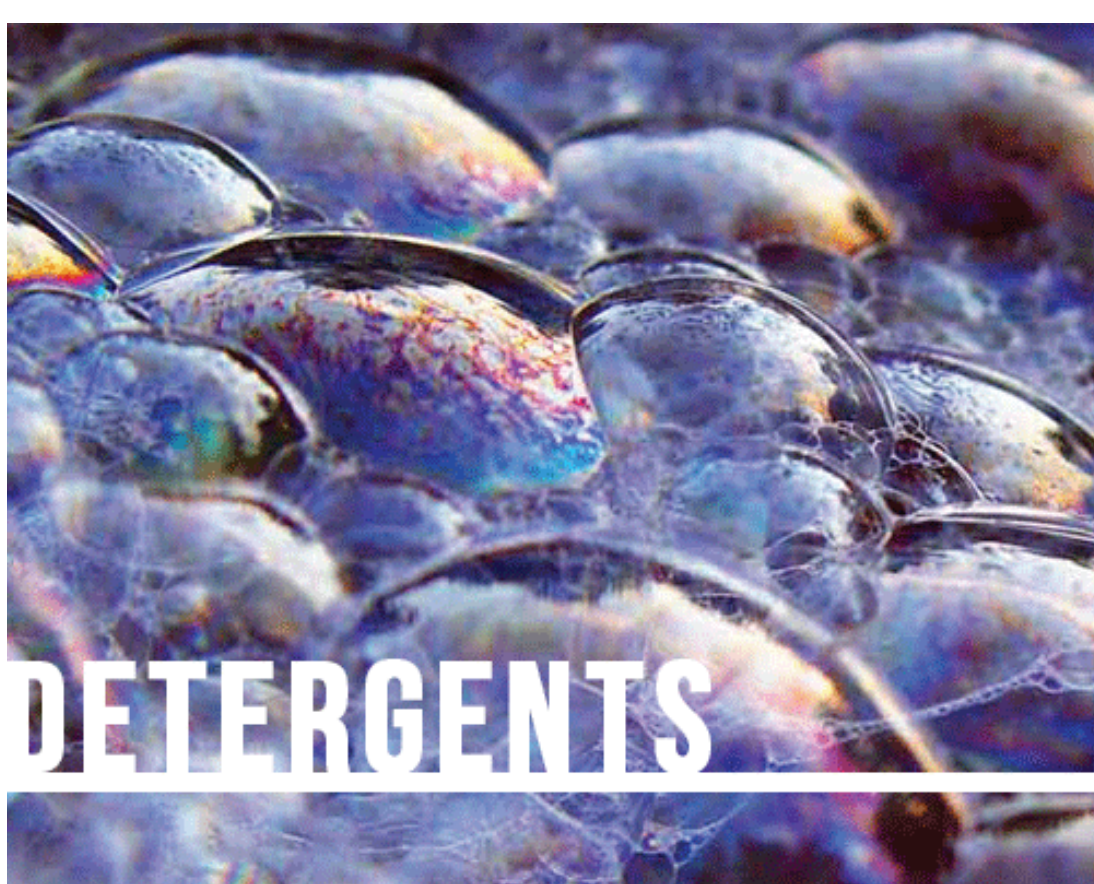
**“STLE’S IN-PERSON COURSE GAVE ME
THE SKILLS TO SUCCEED IN MY CURRENT
POSITION AS A LUBRICATION ENGINEER.”**

WEBINARS AND SHORT COURSES

STLE Webinars and Online Short Courses are another key resource on the Lubrication Specialist and Oil Analyst Learning Pathways. Each STLE Webinar and Short Course module was reviewed by industry experts, and then categorized in each pathway by both topic area and level.

This categorization allows STLE members to maximize the return on investment of their professional development dollars by selecting a Webinar or short course that fits the topic area and level of their professional development needs. STLE Premium Corporate Members can also utilize the Learning Pathways, to get the most out of their Webinar benefits by selecting the topic and expertise levels that best fit the needs of their employees.

If you have any questions about a particular Webinar or short course, call STLE Headquarters at (847)825-5536, or email STLE's Education Manager, Tom Heidrich at theidrich@stle.org.



BOOKS

STLE has also included technical books on the Learning Pathways. These publications have been reviewed by chapter by industry experts for applicability for Lubrication Specialists and Oil Analysts.

STLE provides complimentary access to book chapters on the Learning Pathways through CRC Press and Taylor and Francis. Complimentary access is only available to STLE members.

Those books that are not available for complimentary access are available for purchase through either the STLE or CRC websites.

The following books are currently listed on the Learning Pathways:

- Basic Handbook of Lubrication - 3rd Edition
- ★ [Handbook of Hydraulic Fluid Technology - 2nd Edition](#)
- ★ [Handbook of Lubrication and Tribology - Volume I](#)
- ★ [Handbook of Lubrication and Tribology - Volume II](#)
- ★ [Handbook of Lubrication and Tribology - Volume III](#)
- ★ [Lubrication and Maintenance of Industrial Machinery](#)
- ★ [Lubrication Fundamentals - 3rd Edition](#)
- Machinery Oil Analysis
- Practical Lubrication for Industrial Facilities
- The Lubrication Engineers Manual - 4th Edition
- ★ [Tribology Data Handbook](#)

(Complimentary access to book chapters available to STLE members)

LUBRICATION SPECIALIST PATHWAY

Organized by subject matter experts on STLE’s Education Committee, the key subject areas have been grouped into 5 priority groups as a suggested learning pathway. Individuals can use this as a resource to follow in their goal toward technical competence as a Lubrication Specialist.

The pathway can be customizable for each individual. For example, for individuals who are new to the field, the pathways can be used to develop their competence by following it as established with Priority Groups 1-5. However, for those who are further into their careers, the pathway may be used to focus on certain priority groups or key subject areas where they need to continue to develop their technical competence.

LUBRICATION SPECIALIST LEARNING PATHWAYS

PRIORITY GROUP 1	Natural Gas Engines
Additives	Refrigeration Lubricants
Base Oils - Minerals & Synthetic	PRIORITY GROUP 4
Bearings	Chain Lubrication
Friction, Tribology and Rheology	Energy Efficiency & Lubrication
Gears	Environmentally Friendly Fluids
Grease	Failure/Wear Modes
Hydraulics (Fluid Power)	Heat Transfer Fluids
Physical and Performance Properties	Lube Task & Schedules
PRIORITY GROUP 2	Metalworking Fluids
Compressor Oils - Air & Gas	Optimizing Lubrication
Dispensing System (Filters, Oil Cans, Grease Gun, etc.)	Pneumatics
Electric Motor Lubrication	Problem Solving (Root Cause Analysis, FMEA, etc.)
Filtration and Contamination Control	Purchasing
Health and Safety	PRIORITY GROUP 5
Lubricant Compatibility	Solid Film Lubricants
Oil Analysis, Sampling, Interpretation, Test Methods	Seals
Storage Facilities	Correlation with other Predictive Tools (i.e. vibration)
Transportation On-road, Off-road	Fuels and their Impact on Lubrication
Turbine Oils - Steam, Gas, Hydro, Aero	Medium & Slow Speed Engines for Marine & DMPP
PRIORITY GROUP 3	Reactions with Vacuum & Radiation
Centralized Grease System	Rust Preservation
Circulating, Mist and Spray System	Solvents and Cleaners
Coupling Lubrication	Wire Rope Lubrication
Lubricant Manufacturing	Used Oil Collection
Monitoring & Reducing Consumption of Lubricants	

OIL/CONDITION ANALYST PATHWAY

Organized by subject matter experts on STLE’s Education Committee, the key subject areas have been grouped into 5 priority groups as a suggested learning pathway. Individuals can use this as a resource to follow in their goal toward technical competence as an Oil/Condition Analyst.

The pathway can be customizable for each individual. For example, for individuals who are new to the field, the pathways can be used to develop their competence by following it as established with Priority Groups 1-5. However, for those who are further into their careers, the pathway may be used to focus on certain priority groups or key subject areas where they need to continue to develop their technical competence.

OIL/CONDITION ANALYST LEARNING PATHWAYS

PRIORITY GROUP 1	PRIORITY GROUP 3
Additives	Dispensing System (Filters, Oil Cans, Grease Guns, etc.)
Base Oils - Minerals & Synthetic	Lubricant Compatibility
Physical and Performance Properties	Coupling Lubrication
Friction, Tribology and Rheology	Filtration and Contamination Control
PRIORITY GROUP 2	PRIORITY GROUP 4
Bearings	Storage Facilities
Gears	Health and Safety
Grease	Lube Task & Schedules
Hydraulics (Fluid Power)	PRIORITY GROUP 5
Compressor Oils - Air & gas	Problem Solving (Root Cause Analysis, FMEA, etc.)
Electric Motor Lubrication	Used Oil Collection
Turbine Oils - Steam, Gas, Hydro, Aero	
Oil Analysis, Sampling, Interpretation, Test Methods	

LEARNING PATHWAYS FAQ's

1. Do I need to be an STLE member to utilize the Learning Pathways?

No, you do not need to be an STLE member to use the Learning Pathways. It is free to use and there are no obligations. However, some resources are locked to non-members and only accessible to STLE members.

2. Do I need to log into the STLE website to access the Learning Pathways?

Yes, you need to login to access the Learning Pathways, with your username and password. Some resources are locked to non-members and only accessible to STLE members. If you don't know your username and password, please contact STLE at (847)825-5536 for retrieval. If you don't have a username and password, you can create a *free* non-member account.

3. I logged into the STLE website but can't view all the resources. Why?

There are two different levels of access for STLE members and non-members. For example, non-members cannot view individual book chapters, which are accessible only to STLE members. Non-members will be instructed to purchase books they are interested in. Webinars and online short courses can be purchased by STLE members and non-members, with discounted pricing available to members only.

4. Why can't I find information on a specific topic area?

If you're looking for additional topics, STLE will continuously update and improve the Lubrication Specialist and Oil/Condition Analyst Learning Pathways with new resource materials as they become available. This is an ongoing project, and the Society welcomes contributions and feedback from individuals by taking our online survey that will help improve future STLE education products and services.

5. Am I ready for STLE certification if I have reviewed all of the Learning Pathways?

While the Learning Pathways provide a resource to help individuals become technically competent as a Lubrication Specialist or Oil/Condition Analyst, it does not solely prepare you to pass an STLE certification exam. There are additional requirements such as practical work experience that an individual would need to have prior to taking an STLE certification exam. For more information, visit the STLE certification page at www.stle.org.

LEARNING PATHWAYS FAQ'S

6. How often will the Learning Pathways be updated?

STLE works with volunteers to review content and keep the Learning Pathways functioning and useful for our community. Currently, updates to the Learning Pathways will be made on an annual basis, with new content or refresh of current materials being posted in January of each calendar year.



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