**INDUSTRIAL CHEMISTRY**

The **Training Elements** of a student in Industrial Chemistry Technology major entering coop program in a company should include some or all of the following:

1. **Laboratory Safety**

* Understand the importance of occupational health and safety.
* Know and practice established safety rules, policies and procedures.
* Learn the safe handling and storage of chemicals.

1. **Corporate Culture**

* Familiarize with corporate environment and understand the responsibilities of a lab technician in an industrial setting.
* Understand the importance of meeting timelines on budget and on time.
* Interact with colleagues and appreciate the importance of being a team player.

1. **Sample Purification and Preparation**

* Learn standard purification techniques such as distillation, extraction, and filtration.
* Learn standard sample preparation techniques including sampling and preparation of standard solutions.

1. **Sample Analysis**

* Conduct standard analytical techniques, for sample analysis, such as titrations and volumetric analysis.
* Perform manual and instrumental qualitative and quantitative analyses.
* Operate and troubleshoot analytical instrumentations such as GC, HPLC, AA, UV/Vis, and FTIR.

1. **Quality Control**

* Perform Quality Control procedures and routine statistical calculations to report the results of analyses and tests.
* Optimize and streamline laboratory procedures.

1. **Data Handling and Lab Management**

* Keep and record data accurately.
* Analyze data; prepare reports, plans or other technical documentations.

Organize and report data manually and through laboratory management software such as LIMS.