Course Description

**Course Duration**
The duration is 10 days.

**Course Goal**
The goal of this course is to teach students the skills required to write Taylor Control Language (TCL) sequences using fundamental and advanced language features. Although this course is written for users of Advant OCS with MOD 300 software, it also applies to the traditional MOD 300 System.

**Student Profile**
This training is targeted to system/process engineer or system programmer.

**Prerequisites and Recommendations**
Successful completion of one of the following system engineering courses is required: B115, B400, B405, or B425. Students should also have knowledge of basic process operations and control.

**Description**
In this course, students will learn about the fundamentals of TCL programming and design. Topics include the development of calculation algorithms, database accessing techniques, unit relative and unit symmetrical sequences, inter-program and intra-program control and communications, mailbox facilities, and sequence control statements for concurrent and independent sequence actions.

**Course Objectives**
Upon completion of this course, students will be able to:

- Identify database and environment modifications to use TCL.
- Using the MOD 300 System displays, locate the functional level of sequences.
- Develop, debug, test, and execute sequences using the Editor and Runtime Console Support.
- Develop TCL sequences that:
  - Perform process control calculations, manipulate arrays, and access recipes.
  - Perform start-up, shutdown, and emergency actions.
  - Control system sequences and perform sequence activation.
  - Control batch processes.
  - Monitor and access functional elements.
  - Access/modify sequence parameters.
  - Perform batch process data collection and generate batch reports.
  - Access data and string FCM’s.
# Course Calendar - B515 Taylor Control Language Using Advant OCS

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 2</th>
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</table>
| • General Information  
• MOD 300 Unit Concept  
• MOD 300 Database  
• TCL Structure Basics  
• Editing/Compiling/Linking  
Lab:  
• Reactor Control  
• Edit/Compile/Load  
• Sequence Debugging  
| • Language Basics  
• Sequence Variables  
• Unit Message Interface  
• Sequence Constants  
• Selection Constructs  
• Iteration Constructs  
Lab:  
• Minimal Sequence  
• Sequence Variables and Constants  
| • Language Basics (cont.)  
• String Handling  
• Subroutines  
• Database Access  
• Database Variables  
• CCF Loop Access  
Lab:  
• Operator Input  
• Selection Constructs  
• Database Access  
| • Database Access (cont.)  
• TCL Recipe Access  
• Taylor Ladder Logic (TLL) Access  
• Program Control Block  
Lab:  
• Iteration Constructs  
• Local Array Variables  
• Internal Subroutine  
| • TLL/TCL Interlock applications  
• Summary and Wrap-up  
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<tr>
<th>Day 6</th>
<th>Day 7</th>
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<th>Day 10</th>
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| • Special Topics  
• TCL Mailbox  
• Abnormal Processing  
• Event Processing  
Lab:  
• Reactor Project (cont.)  
• Operator Interface with Subroutine  
| • Report Services Interface  
• History Services Interface  
Lab:  
• Reactor Project (cont.)  
• Basic Reactor Functionality  
• Recipe Control  
| • Advanced Topics  
• External (compiled) Subroutines  
• User Calculation, Synchronous and Asynchronous  
Lab:  
• Project Enhancements  
• Sampling Sequence  
| • Unit Arrays  
• Peripheral I/O Statements  
• Sequential Function Chart Statements  
• Batch 300 Statements  
Lab:  
• Project Enhancements  
• Shared Sampler  
• Batch Fil/Report  
| • TLL/TCL Interlock Applications  
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