

Synchro and SimTraffic V11 (TE-13)

Course Outline – Day 1

8:00am-8:15am	Attendance Verification
8:15am-8:30am	Introduction of Instructor and Students / Ice Breaker
8:30am-9:30am	Background Information Presentation <ul style="list-style-type: none">• What is Synchro 11• What is SimTraffic 11• What will we learn in the next two days
9:30am-9:00am	Lab Session - Importing a Background (Bing or JPEG or DXF) <ul style="list-style-type: none">• Straight Links• Intersections
9:30am-10:00am	Synchro Network Building Presentation
10:00am-10:15am	BREAK
10:15am-11:15am	Lab Session - Drawing a Network <ul style="list-style-type: none">• Curved Links• Grade Separated Links
11:15am-11:45am	Quiz #1 – 10 Multiple Choice Questions
11:45am-12:15am	Synchro Intersection Geometrics and Control Presentation
12:15am-1:15pm	LUNCH BREAK
1:15pm-2:15pm	Lab Session - Intersection Geometrics and Control <ul style="list-style-type: none">• Through Lanes• Pocket Lengths• Channelized Right-turn lanes• U-turns• Lane Drops / Adds• Unsignalized• Signalized• Roundabout
2:15pm-2:30pm	Multi-Modal Traffic Volumes Presentation
2:30pm-3:00pm	Lab Session – Intersection Traffic Volumes <ul style="list-style-type: none">• Vehicles, Pedestrians, and Bicyclists• Peak Hour Factor• Heavy Vehicle Percentage
3:00pm-3:15pm	BREAK
3:15pm-3:45pm	Signal Timings Presentation <ul style="list-style-type: none">• Background• Types of Signal Control
3:45pm-4:15pm	Quiz #2 – 10 Multiple Choice Questions
4:15pm-4:45pm	Wrap-up of Day One
4:45pm-5:00pm	Open Lab Session and Student Questions

Synchro and SimTraffic V10 (TE-13)

Course Outline – Day 2

8:00am-8:30am	Review What We Learned on Day One Presentation
8:30am-9:00am	Signal Timings Presentation (Continued)
9:00am-9:45am	Lab Session – Signal Timings <ul style="list-style-type: none">• Controller Type• Signal Phases• Entering Signal Timing Data
9:45am-10:15	Synchro TIA Presentation <ul style="list-style-type: none">• Manage Developments• Trip Generation• Origins / Driveways• Trip Distribution and Assignment
10:15am-10:30am	BREAK
10:30am-11:00am	Synchro Level of Service Analysis <ul style="list-style-type: none">• Signalized Percentile Delay and LOS• Signalized Highway Capacity Manual (HCM) Delay and LOS• Unsignalized Delay and Level of Service
11:00am-11:30am	Quiz #3 – 10 Multiple Choice Questions
11:30am-12:00am	Optimizing Traffic Signals Presentation
12:00am-1:00pm	LUNCH BREAK
1:00pm-1:30pm	Lab Session – Optimizing Traffic Signals <ul style="list-style-type: none">• Single Intersection• Review Results (Before and After)• Group of Intersections (Single Corridor)• Network Wide Signal Optimization• Review Results (Before and After)
1:30pm-1:55pm	Converting Synchro to SimTraffic Presentation <ul style="list-style-type: none">• Why use microsimulation?• Setting up and running SimTraffic
1:55pm-2:25pm	Lab Session – Converting Synchro to SimTraffic
2:25pm-3:00pm	Comparing Synchro versus SimTraffic Results Presentation <ul style="list-style-type: none">• Intersection Level of Service• Arterial Performance Report• Queuing Information
3:00pm-3:15pm	BREAK
3:15pm-3:45pm	Quiz #4 – 10 Multiple Choice Questions
3:45pm-4:15pm	Wrap-up of Day Two
4:15pm-5:00pm	Open Lab Session and Student Questions