# MTCINE training outline

*Course prerequisites – MTCNA and MTCRE certificates*

<table>
<thead>
<tr>
<th>Title</th>
<th>Objective</th>
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| **BGP**   | • What is Autonomous System  
• What is BGP?  
• Path Vector algorithm  
• BGP Transport and packet types  
• iBGP and eBGP + **LAB**  
• Stub network scenarios and private AS removal + **LAB**  
• Non-stub scenarios + **LAB**  
• iBGP and eBGP multihop and loopback usage + **LAB**  
• Route distribution and routing filters + **LAB**  
• BGP best path selection algorithm  
• BGP prefix attributes and their usage + **LAB**  
• BGP route reflectors and confederations + **LAB** |
| **MPLS**  | • What is MPLS (basics)  
• Static Label Mapping + **LAB**  
• Label Distribution (LDP) + **LAB**  
• What is Penultimate-hop-popping  
• MPLS traceroute differences  
• LDP based VPLS tunnels + **LAB**  
• What is Bridge Split Horizon + **LAB**  
• VPLS Control Word (CW) usage  
• L2MTU importance and MPLS fragmentation  
• BGP based VPLS + **LAB**  
• VRF and route leaking + **LAB**  
• L3VPN (BGP based Layer3 tunnels) + **LAB**  
• OSPF as CE-PE protocol |
| **Traffic Engineering** | • What is traffic engineering and how it works  
• RSVP, Static path, dynamic path (CSPF) + **LAB**  
• Bandwidth allocation and bandwidth limitation differences and settings + **LAB** |