

$\Delta t_{post}$ : TIME REQUIRED FOR THE POSTSYNAPTIC ACTION POTENTIAL TO PROPAGATE BACKWARD THROUGH THE DENDRITE UNTIL THE INPUT SYNAPSE

$\Delta t_{pre}$ : AXONAL DELAY

POSTSYNAPTIC ACTION POTENTIAL IS GENERATED HERE AT TIME  $t_{postAP}$

THE EFFECTS OF POSTSYNAPTIC ACTION POTENTIAL ARRIVES HERE AT TIME

$$t_{postSYN} = t_{postAP} + \Delta t_{post}$$

PRESYNAPTIC NEURON ACTION POTENTIAL IS GENERATED HERE AT TIME  $t_{preAP}$

THE SIGNAL DUE TO PRESYNAPTIC ACTION POTENTIAL ARRIVES HERE AT TIME

$$t_{preSYN} = t_{preAP} + \Delta t_{pre}$$

$$t_{postSYN} - t_{preSYN} = t_{postAP} + \Delta t_{post} - (t_{preAP} + \Delta t_{pre})$$

