

## MODULE 106: RF IMPEDANCE MATCHING

Learning Activities	Time in Class	Outside Time
7	5.5 hours	5 hours

### Overview:

This module addresses impedance matching techniques which are related to the goal of ensuring quality and consistency in RF / plasma manufacturing processes. Upon completion of this module, learners will be familiar with typical plasma loads in RF systems, common impedance matching methods, common LC networks, and the types of variable components in impedance matching. Learners receive practice and are assessed on skills for calculating values for impedance matching variables such as: inductance and capacitance, equivalent impedance of an L-network with load, resonant frequency of a matching network, Q and bandwidth, and range of inductance.

### Module Contents:

#### Narrative

#### Overview

Learning Activity 01: Need For Impedance Matching

Learning Activity 02: Impedance Matching Circuits

Learning Activity 03: Circuit Design And Analysis

Learning Activity 04: Impedance Matching Components

Learning Activity 05: Impedance Matching Questor Game

Learning Activity 06: Introduction To Smith Charts

Learning Activity 07: L-Network Simulation

Slide Show 01: Need For Impedance Matching

Slide Show 02: Impedance Matching Circuits

Slide Show 03: Impedance Matching Components

Slide Show 04: Introduction to Smith Charts

Performance Assessment 01:

Animation 01: Efficiency and Power

Animation 02: "The Questor Game"