



## **ESD302 Home Theater Audio and Acoustics Part II**

The purpose of this course is to explain the aspects of direction and space that we wish to reproduce in home theaters and how multiple channels and loudspeakers can be used to achieve these illusions. The consequences of using free-standing, in- or on-wall loudspeakers are discussed, as are the different configurations of surround loudspeakers. Loudspeaker transducers are explained, along with explanations of some popular enclosure designs. The concepts of impedance, damping, wire and amplifier properties are explained in terms of how they influence sound.

At the conclusion of this course, participants should be able to:

- Express in general terms the requirements for a surround-sound system optimized for a given room and audience size.
- Summarize the requirements for specific loudspeakers to deliver good sound and the appropriate directional and spatial illusions of multichannel music and movies.
- Distinguish between those specifications that are important and those that are not informative.
- Decide on the key elements of a home theater system: loudspeakers, amplifiers, wiring, based on an analysis of the customer's needs and the restrictions imposed by the realities of the room.

Recommend prerequisite: ESD302 Home Theater Audio and Acoustics Part II