(b) Seminar room

Figure 5.1 (a-b) Types of room

Table 5 (b) Material property and sound absorption coefficient

Materials	**Sound Absorption Coefficient**				
	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz
Marble tile	0.01	0.01	0.01	0.02	0.02
Painted block concrete	0.10	0.04	0.05	0.06	0.08
Gypsum	0.20	0.10	0.06	0.04	0.04
Carpet	0.02	0.06	0.15	0.25	0.45

5.2.3 Reverberation Time Calculation

Reverberation times for the entire seminar and classroom are determined by using theoretical calculation by means of Sabine theory as in Equation 1. The calculation uses the details of the sound absorption of room building materials and surface area of the building materials. Calculation were performed in the octave band frequency of 250Hz, 500Hz, 1000Hz, 2000 Hz and 4000Hz as specified by ISO 3382.

$$RT60 = k\,(V/Sa) \tag{1}$$

where, V is the volume of the classroom, k is 0.161 m and Sa is the total surface absorption of a room.