

<b>Department of Building Engineering</b>			
<b>Building Acoustics (68431)</b>			
<b>Total Credits</b>	<b>3</b>		
<b>major compulsory</b>			
<b>Prerequisites</b>	<b>-</b>		
<b>Course Contents</b>			
Fundamental of sound, The ear and the perception of sound , Introduction to ancient building acoustics, Building materials and sound, Sound reflection, absorption, transmission, Room acoustic design, Room acoustic calculation, Sound transmission in buildings, Noise control, Linked rooms, Auditorium and other buildings design, Acoustics electrical equipments			
<b>Intended Learning Outcomes (ILO's)</b>		<b>Student Outcomes (SO's)</b>	<b>Contribution</b>
1	Be able to apply knowledge of physics, mathematics, and engineering science to understand sound, hearing and noise.	A	35 %
2	Be able to understand analysis methods and analysis techniques for acoustical system, which includes sound theory, space geometry and materials selection and their interactions.	E	30 %
3	Be able to conduct proper and simple analysis for an architectural space (e.g. classroom) in order to assess its acoustical performance and to evaluate its ability to meet preset design criteria.	C	35 %
<b>Textbook and/ or References</b>			
B. Stein et al. Mechanical and Electrical equipment for buildings, 10th edition, willey, New jersey, 2006 (Text Book) W. cavanaugh et al., Architectural acoustics principles and practice Willey, USA, 1999 , , ( ) , 1996			
<b>Assessment Criteria</b>		<b>Percent (%)</b>	
First Exam		20 %	
Second Exam		20 %	
Homeworks		10 %	
Projects		10 %	
Final Exam		40 %	
<b>Course Plan</b>			
<b>Week</b>	<b>Topic</b>		
1-3	Fundamental of sound and acoustics		
4-5	Fundamental of sound and hearing		
6-8	Room acoustics		
9-10	Noise control		
11-12	Linked rooms		
12-14	Acoustics electrical equipments		
15-16	Final Exam		