

Course Syllabus

020ACBGS5 Building Acoustics

1. **Course number and name:** 020ACBGS5 Building Acoustics
2. **Credits and contact hours:** 4 credits, 2x1:30 course hours
3. **Instructor's or course coordinator's name:** Michel ISSA
4. **Textbook and other supplemental material:**
 - a. Chemillier P. (1986), *Sciences & Batiment*, edited, Presses de l'ENPC, CSTB, 1986
 - b. Egan D.(1992), *Architectural acoustics*, New York, Mac Graw Hill, 1992
 - c. VAL M. (2002), *Acoustique Appliquée*, Paris, Dunod, 2002.
 - d. Instructor's Class Notes
5. **Specific course information**
 - a. **Catalog description:** Provide the necessary elements to: Acoustical treatment for rooms, Achieve the acoustical requirements in Buildings, Acoustical insulation against noise, Vibration & Noise Control.
 - b. **Prerequisites:** None.
 - c. **Required/Elective/Selected Elective:** Required major course for Buildings Performance and Isolation.
6. **Specific goals for the course:**
 - a. **Specific outcomes of instruction:**
 - Introduce the students to the fundamentals of Acoustics.
 - Sound Level and Octave Band
 - Weighted Sound Level and Reverberation Time.
 - Measurements Interpretation & Acoustical Room Treatment.
 - Sound Reduction Index & Sound Level Difference.
 - Sound Isolation against Airborne noise and Vibration.
 - Enhance the students' writing and oral presentation skills
 - b. **KPIs addressed by the course:**

KPI	a1	a2	c3	e3	g1	k1	k3
Covered	x	x	x	x	x	x	x
Assessed							
Give Feedback							

7. Brief list of topics to be covered and approximate number of lectures:

1. Introduction (2 hours)
2. Weighted Sound Level & Octave Band (4 hours)
3. Absorption Coefficient & Reverberation Time (4 hours)
4. Acoustical Room Treatment (8 hours)
5. Weighted Sound Reduction Index & Sound Level Difference (4 hours)
6. Acoustical Isolation against Airborne Noise & Vibration (6 hours)
7. Acoustical requirements for Equipment Installation (2hours)