Distance Learning Program for

Professional Education in Acoustics

UNSW AUSTRALIA Canberra

Overview

Background This professional education program is aimed at providing appropriate short courses to meet the needs of those embarking on a career in Acoustics. It is primarily aimed at those entering or who have recently entered the acoustical consulting field. It will also be of value for those working in government agencies and allied organisations needing a fundamental understanding of acoustics. The program is based on a similar program that has been offered via Universities and the UK Institute of Acoustics (IOA). The program has the support of the Association of Australian Acoustical Consultants (AAAC).

There are no specific prerequisites for this program. It is assumed that the applicant will have completed the equivalent of an undergraduate degree in Engineering, Science or Architecture. If not, they may need to seek additional assistance with some mathematics and physics.

Each module of the program will be offered as a separate Module in distance learning mode so that it can be undertaken throughout Australia, New Zealand and Asia and can be commenced at any time. Each module comprises course notes, assignments and some modules include practical exercises and a test. Registrants work through this material at their own pace and in their own location submitting the work electronically. The practical work and the test are undertaken at the registrant's location under supervision of their employer. It is expected that those registrants working for acoustical consultancies will receive support and supervision by their supervisors. For registrants who are working on the program without support from their employer will be given assistance by phone or email from the course coordinator. This assistance can be supplemented with assistance from a company that is a member of the AAAC.

Certificates A certificate from the UNSW will be issued for successful completion of each module. Registrants who have completed a minimum of 4 of the modules can be provided with a Diploma issued by the AAAC and stating the names of the modules successfully completed. Should any registrants wish to articulate to a formal university program the information on their progress in the modules will be provided to the educational institution for a decision on the amount of advance standing that can be given. Electronic copies of submissions for each module will be available for the educational institution to assist with this decision.

Association of Australian Acoustical Consultants

Structure Completion of Module 1 is a pre-requisite for undertaking the other modules in the program. It is recommended that Module 2 is then completed before any other modules are commenced.

While the aim is to have a program that is flexible to allow registrants to work at their own pace it has become clear that there is a need for some structure to avoid registrants taking an extraordinary time to complete each module. So to encourage completion of each module the following structure has been established:

Each module should be completed within 12 months of registration – any extension to the 12 months requires an approval by the registrant's supervisor.

Marking of assignments and experiments will be batched on a 2 month cycle and will be due in on the last day of the following months:

January March May July September November

The marked submissions will normally be returned with in 2 weeks of this date.

Modules 1 and 2 require successful completion of a test. This is undertaken in the normal workplace under supervision. Alternative arrangements for those not working will be made for the test to be undertaken in a convenient location. The tests will be offered 3 times per year in mid:

March July November

Modules 3, 4, and 5 require submission of a major project for assessment. The dates for submission of these major projects will be the last day of :

March July November

The marked major project will normally be returned within 4 weeks of this date.

Module Content

1. General Principles of Acoustics - must be successfully completed before any other module is attempted. Exemption from this requirement for prior studies in acoustics will be considered on application. This module provides an introduction and overview of the following topics – which will then be developed in subsequent modules.

Section 1	Basic concepts.
Section 2	Variation of noise level with time
Section 3	Hearing and perception of sound
Section 4	Propagation of sound
Section 5	Sound absorption
Section 6	Sound reduction in buildings
Section 7	Vibration
Section 8	Measurement instrumentation
Section 9	Principles of noise control

Assessment for this module is based on 2 assignments, 2 practical exercises and a closed book test.

2. Acoustic Measurements – this builds upon the content of Module 1 and would normally be attempted following completion of Module 1

- Section 1 Care of Measuring Equipment
- Section 2 Sound Level Meter and Noise Logger
- Section 3 Noise Measurements Outside Buildings
- Section 4 Noise Measurements Inside Buildings
- Section 5 Occupational Noise
- Section 6 Vibration Measurements
- Section 7 Reports

Assessment for this module is based on an assignment and a closed book test.

3. Room Acoustics and Building Acoustics – this module includes the following sections

- Section 1 Basic Concepts in Room and Building Acoustics.
- Section 2 Nature of Sound and Behaviour of Sound in Rooms
- Section 3 Sound Reduction - sound intrusion into spaces, acoustic privacy of rooms and sound transmission paths in buildings.
- Section 4 Reverberation - characteristics of sound within the space.
- Section 5 Materials and their Acoustic Properties
- Section 6 Mechanical and Other Services Noise.

Assessment for this module is based on minor and major assignments

4. Environmental Acoustics – – this module includes the following sections

- Section 1 Overview of environmental noise
- Section 2 Industrial noise – measurement, assessment and control options
- Section 3 Road Traffic noise– measurement, assessment and control options
- Section 4 Aircraft noise – measurement, assessment and control options

Assessment for this module is based on minor and major assignments

The following module is currently available in a testing mode

5. Vibration – – this module includes the following sections

- Section 1 Overview of Vibration and Shock:
- Section 2 Vibration measurement
- Section 3 Signal processing)
- Section 4 Vibration criteria
- Section 5 Structural Dynamics and Radiation of noise from vibrating surfaces
- Section 6 Vibration isolation and control

Assessment for this module is based on an assignment and a report

FURTHER INFORMATION

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