

Distance Learning Program for Professional Education in Acoustics

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).

Each module of the program will be offered as a Short Course in distance learning mode so that it can be undertaken throughout Australia. Each module comprises course notes, tutorials, experiment and a test. Students will work through this material at their own pace. For some modules there is a requirement to undertake some measurements. For those working for acoustic consultants and with access to equipment, supervision for these can be arranged at the place of work. Alternate arrangements will be provided, on request, for students who do not have access to such resources.

The program will comprise notes based on the structure developed for the IOA program and updated as necessary for relevance in Australia. A certificate will be provided on successful completion of each module. On successful completion of four modules an industry diploma will be issued by the Australian Acoustical Society.

Normally the first module, 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. Modules available include Measurement Techniques, Architectural and Building Acoustics, Environmental Noise, Vibration Control.

Prerequisites 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.

Module Content Each module of the program will consist of

- course notes to be sent to the students electronically,
- tutorials to be completed and returned to UNSW for marking
- practical exercises when appropriate
- test or major assignments to be undertaken and to be returned to UNSW, Canberra for marking
- Certificate to be provided on successful completion

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Module 1 General Principles of Acoustics

This module is currently available for commencement

Content of Module 1, General Principles of Acoustics, This module provides an introduction and overview of the following topics – many of which will then be developed in subsequent modules.

Chapter 1 Basic concepts – oscillatory system, basics of wave systems, decibel scale, frequency analysis, hearing.

Chapter 2 Descriptors for time varying noise levels, L_{eq} , L_{DN} , L_{10} etc.

Chapter 3 Sound and hearing, noise criteria and noise rating, types of hearing loss.

Chapter 4 Behaviour of waves, source mechanisms (monopole, dipole etc), outdoor propagation, principles of barriers.

Chapter 5 Sound in spaces (small and large), reflection, absorption, reverberation time.

Chapter 6 Airborne sound insulation, standardised and weighted level differences, structure borne sound, impact sound.

Chapter 7 Vibration, undamped free oscillations, damped driven oscillations, displacement, velocity, acceleration, vibration control, damage to buildings, sensitive equipment, human vibration.

Chapter 8 Measurement microphones, analysis equipment, dosimeter, intensity probe, accelerometers, general measuring procedures.

Chapter 9 General noise control strategies, mechanical ventilation noise, hearing conservation obligations.

Timing

Module 1, General Principles of Acoustics, can be commenced at any time. The test will be available on 3 or 4 times throughout the year. Students can choose to attempt the test at their preferred date.

Registration

Registration includes notes provided electronically, assistance with tutorial work, provision of test and certificate for successful completion.

Registration for Module 1 2016 General Principles of Acoustics

A separate form to be completed for each registrant from any one organisation

Title:..... Date:

Family name:

Given Name:

Organisation

Postal Address:

Suburb: State:Postcode:

Country:

Telephone: (W) Mob

Fax:Email:

Registration Fee: please tick box

Full registration fee	\$990 + \$99 GST	=\$1089
AAS, NZAS or AAAC members or Defence personnel	\$880 + \$88 GST	=\$ 968
3 or more from one organization in one booking	\$770 + \$77 GST	=\$ 847

Invoice will be raised following processing of this application form

Payment of the invoice can be made on line and receipt provided

Name for Invoice if different from registrant's details above:

Name

Position

Address

Email Phone (W)

Cancellation Policy: *If a registrant cancels within 5 working days of payment of the invoice a refund of the registration fee less \$100.00 administration fee will apply.*

ABN 57 195 873 179 CRICOS provider Code 00098G

ENQUIRIES to Marion Burgess

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