



**University of Wollongong
Wollongong Campus
Faculty of Creative Arts**

SUBJECT OUTLINE

Subject Number: SCMP112
Subject Name: Issues in Sound 2: Acoustics
Credit Points: 6
Pre-Requisites: SCMP111
Co-Requisites: NIL
Session & Year: Spring 2007

Teaching Staff:

Position	Name	Room	Telephone No.	Email	Consultation Times
Coordinator Lecturer (wks 9-13)	A/Prof Stephen Ingham	25.G2 2	4221 4593	singham@uow.edu.au	Tue 8.30-9.30 Wed 8.30-11.30
Lecturer (wks 1-8)	Dr Tom Fitzgerald				
Technical Officer	Mr Brent Williams				

TIMETABLE: 2hrs Lecture + 1hr Seminar per week

Day	Class	Time	Room
Monday	A	9.30-12.30	17.104
Tuesday	B	9.30-12.30	17.104

***Timetable may be subject to change**

Subject Description: This subject explores contemporary issues in sound, through the study of acoustics, Topics to be examined in the lectures/seminars include micro-tonality and alternative tuning systems, the production, transmission and reception of sound, and instrument and concert-hall design.

Learning Objectives: On successful completion of this subject, students should have

- Achieved a broad general understanding of the basic properties of sound
- The ability to write and express orally on specific issues in acoustic theory
- A basic ability to employ digital audio editing tools and software synthesizers for composition and production.

In meeting these objectives, students will develop skills relevant to the following **Attributes of a Wollongong Graduate:**

1. A commitment to continued and independent learning, intellectual development, critical analysis and creativity;
2. Coherent and extensive knowledge in a discipline, appropriate ethical standards and, where appropriate, defined professional skills;
3. An ability to analyse issues logically, evaluate different options and viewpoints and implement decisions.

ATTENDANCE

Attendance at lectures/tutorials/studios/practicals is compulsory and students who miss more than one tutorial without providing evidence of a serious medical or personal reason for their absence may be required to submit additional assessment material in order to pass the subject. A serious pattern of non-attendance will result in a fail.

ASSESSMENT DETAILS:

Students are required to attempt all assessment tasks in order to be eligible for a pass in this subject.

All Assessment tasks to be submitted at the **start of lecture** the week the project is due.

Plagiarism is intellectual property theft and will not be tolerated. The Faculty of Creative Arts uses the *MLA* method for citing and formatting academic research and writing as set out in:

- Gibaldi, Joseph. MLA Handbook for Writers of Research Papers. Sixth Edition. New York: Modern Language Association of America, 2003.
- The following UOW web site gives a useful summary on appropriate referencing, the art of successful paraphrasing, and the avoidance of plagiarism:
www.uow.edu.au/handbook/courserules/plagiarism.html

However, please note the citation system used in the examples discussed on the above web page are in an alternative to *MLA* and you will need to make appropriate formatting adjustments. For further information on the issue of plagiarism, refer to the Essential Information attached to this subject outline.

Assessment Task No 1: Research Essay 1

Marked out of 100 – Weighting 40 %

1. Description:	A research essay, with bibliography, on a topic in acoustics drawn from a list to be presented at the commencement of the subject.
2. Due Date:	Tuesday 21 August (week 5)
3. Format:	Essay - limit 2500 words
4. Assessment Criteria:	Work will be assessed on the basis of evidence of acquisition of theoretical issues and terminology, clarity of argument and presentation.
5. Must attempt:	Yes

Assessment Task No 2: Oral presentation

Marked out of 100 – Weighting 30 %

1. Description:	Fifteen (15) minute oral presentation, on a relevant topic in acoustics to be negotiated with the course co-ordinator at least two weeks in advance of the presentation date
2. Due Date:	Weeks 11-13, as allocated

3. Format:	Fifteen (15) minute presentation
4. Assessment Criteria:	Clarity of presentation and depth of research.
5. Must attempt:	Yes

Assessment Task No 3: Class test

Marked out of 100 – Weighting 30 %

1. Description:	Paragraph definitions and multiple choice questions to be answered in the Tuesday seminar in Week 13
2. Due Date:	Tuesday 23 October (week 13)
3. Format:	Written class test.
4. Assessment Criteria:	Accuracy and evidence of detailed knowledge of the topics assessed.
5. Must attempt:	Yes

Performance Grades & Descriptors:

HD	High Distinction	85 – 100%	This work shows excellent understanding of the topic, evidence of independent critical thought and creativity. It may contain blemishes, but these are compensated for by signs of high intellectual quality, especially clear, well-organised and forceful argument, grasp of the relevant technology and originality of approach.
D	Distinction	75 – 84%	This work shows good understanding of the topic, evidence of independent critical thought and an above average level of creativity. It attempts to develop evaluative and critical arguments. Such arguments may be second-hand and they may be flawed, but serious attempt at criticism has been made.
C	Credit	65 – 74%	This work shows evidence of understanding of the relevant material; contains only small gaps or minor errors. An attempt has been made to evaluate arguments or develop critical arguments
P	Pass	50 – 64%	This work shows evidence of a satisfactory level of understanding relevant material; it may contain gaps, errors or other kinds of blemishes. However, little or no criticism or evaluation of arguments is attempted.
PC	Pass Conceded	45 – 49%	The work does not quite reach the qualities required for a passing grade, however, the student is required to repeat the subject in order to complete the major.
PR	Pass Restricted	45 – 49%	The work does not attain a sufficient standard for a pass or pass conceded. The subject must be repeated for the student to progress to the next stage of instruction.
F	Fail (unsatisfactory completion)	0 - 49%	Not a serious attempt at the topic.

Weekly Outline:

Week No.	Topic/ Task
Week 1	The terminology of acoustics

23 July	
Week 2 30 July	Vibration and the production of sound
Week 3 6 August	The transmission of sound
Week 4 13 August	The perception/reception of sound
Week 5 20 August	Research Essay due Sound and architecture
Week 6 27 August	Acoustic studio design theory
Week 7 3 September	Postgraduate Week - no lectures
Week 8 10 September	Instrument design 1 (chordophones, idiophones)
Week 9 17 September	Instrument design 2 (aerophones, membranophones)
Week 10 1 October	Public Holiday - no lectures
Week 11 8 October	Intervals, scales, tuning and temperament 1
Week 12 15 October	Intervals, scales, tuning and temperament 2
Week 13 22 October	Class Test

Textbooks:

Please note: this list is not comprehensive. You should supplement these recommendations with readings you discover through your own research, both online and in hard copy.

Backus, John: The Acoustical Foundations of Music, 2nd ed., Norton 1977 (compulsory text)

Hall, Donald: Musical Acoustics, 2nd ed., Brooks/Cole, 1990

Huber, David and Runstein, Robert: Modern Recording Techniques (5th Edition). Focal Press, 2001

Pohlmann, Ken: Principles of Digital Audio. New York, McGraw Hill, 2000

Prendergast, Mark The Ambient Century: from Mahler to trance: the evolution of sound in the electronic age. New York, Bloomsbury, 2003..

Pressing, Jeff: Synthesizer Performance and Real-Time Techniques, Oxford University Press, 1992

Rossing, Thomas: The Science of Sound, 2nd ed., Addison-Wesley, 1990

Shapiro, Peter (Ed.): Modulations. A History of Electronic Music: Throbbing Words On Sound. New York, Calparinha Productions, 2000

Gibaldi, Joseph. MLA Handbook for Writers of Research Papers. Sixth Edition. New York: Modern Language Association of America, 2003.