

# BAA Recording Arts and Sciences 11

**District Name:** Coquitlam  
**District Number:** SD #43  
**Developed by:** Gord Hembruff/Ingrid Gay  
**Date Developed:** April 2004  
**School Name:** Port Moody Secondary  
**Principal's Name:** Karen Jensen

**Board/Authority Approval Date:** April 20, 2004

**Board/Authority Signature:**



**Course Name:** Recording Arts and Sciences

**Grade Level of Course:** 11

**Number of Course Credits:** 4

**Number of Hours of Instruction:** 120

**Prerequisite(s):** None

**Special Training, Facilities or Equipment Required:**

It is suggested that the teacher have extensive professional experience rehearsing, performing and recording. In addition, a strong practical understanding and knowledge of how to operate sound equipment will enhance the teaching environment. As well, it would be desirable for the teacher to have extensive knowledge of music history, music business practices and to remain current with this ever changing field of technology.

**Course Synopsis:**

This is an introductory course to the world of modern studio recording techniques and offers instruction on all aspects of the recording of sound, both in its technical application and its creative musical side. Some of the content covered will be analog multi-track recorders, digital multi-track recorders, computer "hard disk" recording, mixing and editing techniques, knowledge of acoustics, microphones and outboard gear such as reverb, distortion, flangers and compressor/limiters. This course will help prepare students for a career in music in which knowledge of these skills and applications are very essential. In addition, it will compliment other musical training that can lead to a profession and/or life-long enjoyment.

**Rationale:**

There have been major changes in the music industry and how we appreciate this art form. This course is designed to offer instruction relating to this new age, which goes beyond traditional music education.

**Organizational Structure:**

<b>Unit/Topic</b>	<b>Title</b>	<b>Time</b>
Unit 1	Introduction to Sound	10
Unit 2	Basic Equipment Operations	40
Unit 3	Recording Session Strategies (Planning the Session)	30
Unit 4	Project Completion (Finishing the Session - Mix to Master)	30
Unit 5	Introduction to the Music Business	10
<b>Total Hours</b>		120

**Unit/Topic/Module Descriptions:**

**Unit 1: Overview - Introduction to Sound**

**10 hours**

Students will receive basic instruction in the science of sound. Acoustic topics to be covered include frequency, amplitude, reflections, acoustic materials and environments, transmission of sound, basic sound wave shapes and how it applies to overtone series, timbre and pitch. Students will understand how these relate to the recording process.

**Curriculum Organizers: Understanding Waveforms**

*It is expected that the student will:*

- demonstrate an understanding of how sound travels from an agitated source through a medium to a receiver
- demonstrate an understanding and identify that waveforms are complex, consisting of overtones and a variety of shapes

**Curriculum Organizers: Understand and Identify the Acoustic Environment**

*It is expected that the student will:*

- demonstrate an understanding of the sound absorption and reflection of different materials and acoustic space
- demonstrate an understanding of how these are captured in real environments and digital emulations

**Curriculum Organizers: Understanding Technical Aspects of Sound**

*It is expected that the student will:*

- research and summarize the concepts of frequency, hertz, decibels, harmonic distortion, amplitude and phase cancellation.

**Unit 2: Overview - Basic Equipment Operations****40 hours**

Students will become familiar with the hardware equipment used in the recording studio. This unit will combine theoretical instruction and practical hands-on experience.

**Curriculum Organizers: Introduction to Microphones**

*It is expected that the student will:*

- demonstrate proficiency in the theory of transducers
- demonstrate understanding of microphone types such as dynamic, condenser, etc.
- demonstrate proficiency in pick-up patterns such as cardioid, hyper-cardioid, etc.
- demonstrate proficiency in microphone placement before and during recording

**Curriculum Organizers: Understanding the Mixer**

*It is expected that the student will:*

- learn about signal flow, routings, and patch bay
- demonstrate proficiency in equalization and its practical uses
- demonstrate proficiency in level setting and gain controls
- demonstrate proficiency in general mixing techniques that apply to musical styles and instrument configuration

**Curriculum Organizers: Introduction to Signal Processors**

*It is expected that the student will:*

- demonstrate proficiency with a variety of processing equipment including reverb, delay, gating, compression, chorus, flanging, distortion, looping, and sampling

**Unit 3: Overview: Recording Session Strategies (Planning the Session)****30 hours**

Students will learn how to plan the entire recording session from when the session will take place, who will perform, when will they perform, what equipment is needed, how long the session will last, who is the recording engineer, who is producer, who will do final mix down.

**Curriculum Organizers: Assessing Resources (Personal)**

*It is expected that the student will:*

- assess how many musicians are required
- assess the order of recorded performance
- organize the various roles of engineer, producer and assistants

**Curriculum Organizers: Assessing Resources (Physical)**

*It is expected that the student will:*

- select what equipment is needed ie: number and type of microphones, acoustic isolation, monitor equipment and general accessory equipment needs
- create a comfortable recording environment

**Curriculum Organizers: Assessing Resources (Technical)**

*It is expected that the student will:*

- determine proper microphone placement
- demonstrate awareness of phase cancellation, acoustic bleeding, ground loops, and other distortions
- troubleshoot and repair minor problems

**Unit 4: Overview: Project Completion (Finishing the Session - Mix to Master) 30 Hours**  
Students will focus on the art of mixing down to final project.

**Curriculum Organizers: Artistic Considerations**

*It is expected that the student will:*

- research and explore musical placement of sounds in accordance to stylistic considerations
- experiment with a variety of mixes using contrasting levels and placements

**Curriculum Organizers: Technical Considerations**

*It is expected that the student will:*

- demonstrate an understanding of the effect of panning, compression and other external affects on the final mix
- demonstrate an understanding of the technical process of mixing to a two-track master

**Unit 5: Overview - Introduction to the Music Business**

**10 Hours**

Students will research and compile information pertaining the music recording industry.

**Curriculum Organizers: Copyright Laws**

*It is expected that the student will:*

research Canadian copyright law and how it pertains to the recording industry

demonstrate an understanding of the present ethical issues regarding the distribution of recorded material

**Curriculum Organizers: Marketing and Publishing**

*It is expected that the student will:*

research and contact local music publishing houses

research and report on the independent music distribution

**Curriculum Organizers: Making Connections**

*It is expected that the student will:*

research and report on strategies for networking with other musicians

**Instructional Component:**

- direct instruction
- indirect instruction
- interactive instruction
- demonstration
- group work
- research
- practical application
- analysis of own and other recordings
- modelling

**Assessment Component:**

- Effective formative assessment via:
  - Clearly articulated and understood learning intentions and success criteria
  - Questions posed by students, peers and teachers to move learning forward
    - Discussions and dialogue
  - Feedback that is timely, clear and involves a plan
  - Students are resources for themselves and others – peer and self-assessment
  - Student ownership

Formative assessment used to adapt learning experiences and inquiry plans on an on-going basis to meet specific learning goals.

Development, awareness and action, based upon metacognition intended to lead to learner independence and self-coaching.

**Summative Assessment:**

Summative assessments will be determined as students demonstrate proficiency/mastery toward particular learning outcomes. Summative assessments and final grades will reflect the following:

- Students will work collaboratively with the teacher to determine summative achievement on assignments and letter grades based upon dialogue, and evidence of learning
- Behaviour and work habits will NOT be included when determining letter grades
- Marks will not be deducted for late work
- Extra credit and bonus marks will not be awarded
- Plagiarizing will not result in reduced marks/grades –the student will be required to demonstrate their learning authentically
- Attendance will not be considered toward letter grade
- Only individual learning demonstrated –no group marks – will be used to determine grades
- Letter grades will reflect learning towards the learning outcomes articulated above
- Letter grades will be based upon criteria provided/agreed upon toward the learning outcomes
- Letter grades will be determined in relation to the learning outcomes – not in comparison to the achievement of other students
- Poor work will not be assessed towards grades – students will only be assessed on quality work
- Professional judgment and evidence will be used to determine final letter grade in consultation with the student
- Zeros will not be assigned to missed assignments – all required assignments must be completed
- Formative or practice towards learning outcomes will not be included in final grade assessment
- Most recent evidence toward learning outcomes will be used to assign letter grades – learning is not averaged over time

**Learning Resources:**

## Books

Sound Reinforcement Handbook, Davis and Jones  
Modern Recording Techniques, Huber and Runstein  
Creative Recording, White  
Multi-Track Recording for Musicians, Hurtig

**Additional Information:**

This course has been successfully running at Port Moody Secondary School since 1993.